



Technical information for paging, trunking and private wireless networks.

DECEMBER 1999

Includes 1999 Buyers' Guide

Index to 1998 Features



Testing Radios Without Knowing The Frequency Or Tones Can Be Tricky

NEW
Now with
LTR
Decoding

TA DA !

The One And Only Xplorer

1 The Xplorer's high speed sweep doesn't miss a thing. Instantly demodulate any RF carrier from 30MHz - 2GHz. Quickly determine audio quality on any analog radio and monitor that frequency.

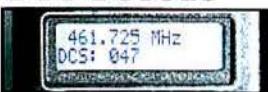
2 Quickly determines the frequency of a radio and displays that frequency on its **two line LCD display**. Ideal for **quick radio checks**, automatically determining a radio's frequency **without receiver setup time**.

3 **Built-in decoder** instantly determines any CTCSS, DCS, DTMF, or LTR present for that frequency.

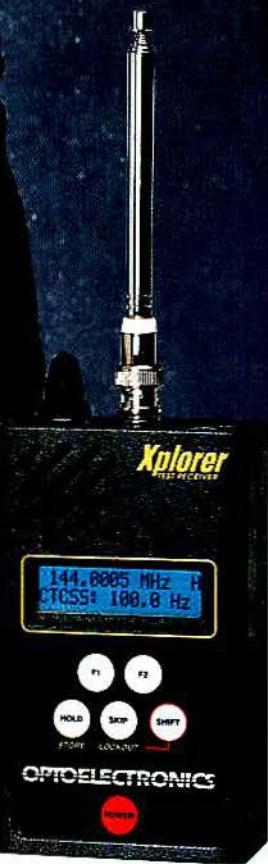
CTCSS Decode



DCS Decode



DTMF Decode



Patent No. 5,471,402

The Xplorer Features:

- 500 memories with time and date
- 1000 frequency lockouts
- Built-in PC interface
- Displays: frequency, CTCSS, DCS, LTR, DTMF, Deviation and Signal Strength
- Auto / manual hold and skip
- Sweeps 30MHz - 2GHz in < 1 second
- 10 Lock in / Lockout frequency ranges

FACTORY DIRECT ORDER LINE: 800•327•5912

OPTOELECTRONICS®

5821 NE 14th Avenue • Ft. Lauderdale • FL • 33334

Telephone • 954•771•2050 Fax • 954•771•2052 Email: sales@optoelectronics.com

Specifications are subject to change without notice or obligation. Visa, MasterCard, C.O.D.

Circle (1) on Fast Fact Card

www.optoelectronics.com

MADE IN U.S.A.



What Allows Our Mobile Radio To Rise Above the Competition?



9800 Intruder Mobile

The Features.

Standard Features

- Front Firing Speaker
- 25/12.5 kHz Narrowband Operation
- 6.25 kHz Frequency Stepping
- LCD Alpha-Numeric Display
- Five Programmable Function Keys
- Two-Levels of Priority Scanning
- Eight Character Alpha Tags
- LTR® Compatible

LTR-Net™ Features

- Unique Radio ID
- Electronic Serial Number Identification
- Direct Radio-to-Radio Calls*
- Direct Inward-Dialed Phone Calls*
- Backward Compatible with Existing LTR Systems
- Cross-Band Calling Between Subscribers on UHF, 800 and 900 MHz channels
- Over-the-Air Management
- Roaming with Auto-Registration

Voice Privacy Features

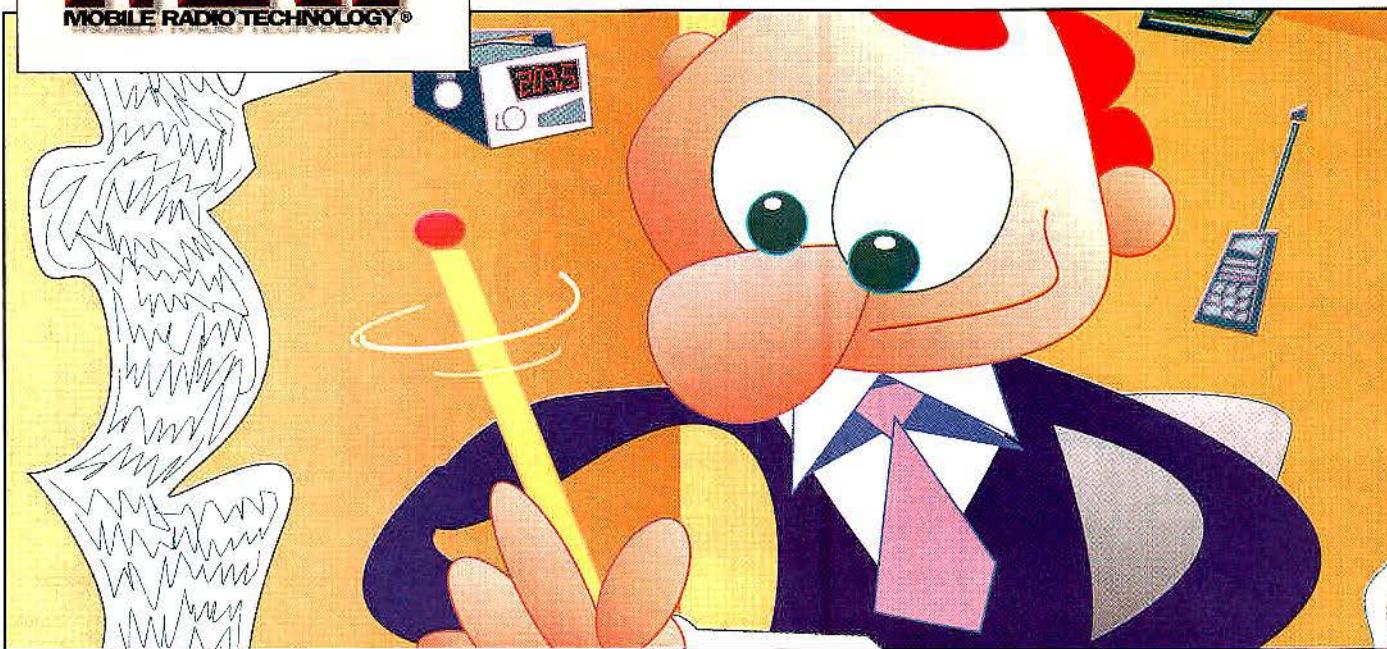
- Plug-In Scrambling
- High and Medium Security Options
- Hop Rates Up to 1000 Times a Second
- Automatic Reception of Secure and Non-Secure Signals
- Over-the-Air Programming With Radio Disable
- Compatible With Transcrypt CVP® Scrambling (SC20-410/430/460)
- Front Panel Clear/Code Activation
- Visual Clear/Code Mode Indication on LCD Display

* DTMF microphone required.



4800 NW 1st Street • Lincoln, NE 68521 U.S.A.
800-765-5365 • 402-474-4800 • Fax 402-474-4858
www.transcrypt.com

Transcrypt, EFJohnson, LTR and CVP are registered trademarks of Transcrypt International, Inc. LTR-Net™ is a trademark of Transcrypt International, Inc. ©1998 Transcrypt International, Inc.



On the cover: MRT's 12th annual Buyers' Guide serves as the year-round reference for buying in 1999. More than 1,000 companies are listed, representing more than 100 categories of products from air conditioning equipment to repeaters to wattmeters, and more than 10 categories of services from accounting and billing to tower space rental.

Cover illustration by John Hayes.

features

14 1999 Buyers' Guide

MRT's annual directory provides you with essential information you will want to retain for quick reference throughout the year. Products and services are listed, as well as brand names and company addresses.

16 Product directory

More than 100 categories of equipment for the mobile radio industry are listed, as well as more than 1,000 suppliers. Advertisers in this issue are listed in blue.

63 Services directory

Mobile radio services such as accounting and billing, consulting, repair, technician training, tower installation and tower space rental are listed, as well as the companies that provide them. Advertisers are shown in blue.

66 Company addresses

An alphabetical listing of more than 1,000 suppliers and service providers appears in this section.

99 Brand names directory

Sort out which company is associated with specific mobile radio industry brand names in this alphabetized listing.

101 Index to 1998 features

All of the 1998 articles plus two departments, "In the Public Interest" (formerly "Regulating Technology") and "Technically Speaking," are indexed by subject. An alphabetized author index lists the features and columns that each author has written during the year.

departments

4 Editorial

Don Bishop

Geotek Communications goes under

8 Calendar

Editorial forum

David Keckler

Grease is the word

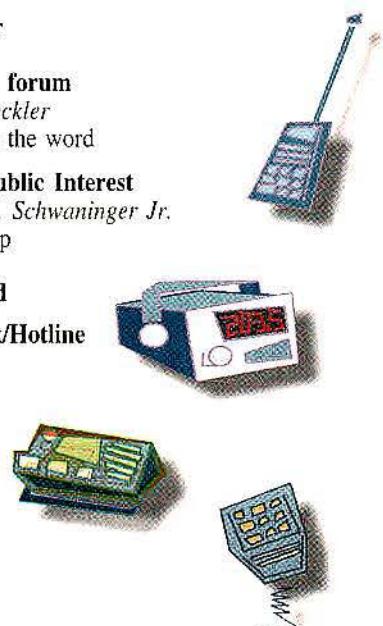
10 In the Public Interest

Robert H. Schwaninger Jr.

It's a wrap

103 Classified

120 Ad index/Hotline



NEW from TX RX

806-960 MHz



Broadband Collinear Antenna

- 154 MHz Bandwidth
- 8 dBd gain
- 10° Vertical Beamwidth
- 1000 Watt Power Handling
- 225 mph Rated Wind Velocity

With three patents pending, this omnidirectional collinear array antenna adds a new dimension to conventional base station antenna coverage. Its true corporate-feed design improves pattern control, allowing higher gain from a shorter antenna. At only 9.5 feet, it's built to survive ice and the fiercest storms. With optional 3° or 5° downtilt, plus one model covering SMR, Paging, GSM and Cellular applications, this antenna is the first to offer "one-size-fits-all" performance for virtually any application.

**Model No.
101-90-08-0-01**

Operates with 1.35:1 VSWR over the entire 806-960 MHz range.

TX RX Systems Inc.
8625 Industrial Pkwy.
Angola, NY 14006
Ph: 716-549-4700
Fax: 716-549-4772
Email: sales@txrx.com
Web Site: www.txrx.com



A member of Bird Technologies Group

Circle (5) on Fast Fact Card

Tx & Rx Multicouplers • Tower Mounted Preamplifiers • Signal Boosters • Duplexers • Cavity Filters • RF System Products

Geotek Communications goes under



Geotek Communications, Montvale, NJ, which has been operating under protection from creditors under Chapter 11 of the U.S. bankruptcy code, shut down its U.S.-based digital wireless networks on Oct. 18 and ceased to provide proprietary wireless mobile logistics systems. An estimated 160 employees were laid off. As the operator of 900MHz SMR networks in 11 U.S. markets, Geotek used frequency-hopping multiple-access (FHMA) technology adapted from Israeli military applications. It offered service in 11 markets; among them were Boston; Philadelphia; New York; Washington; Miami; Tampa, FL; Orlando, FL; Houston, San Antonio and Phoenix.

Joe Ambersini, vice president of Brooklyn, NY-based Rapid Armored, a Geotek customer, said: "If I had the money, I'd buy the company myself. The product was that good. And the service, through Multimedia, our agent, was good. The price was right. I guess their management must have had problems. They notified us on Oct. 1 that they were shutting down on Oct. 18. I'm disappointed in that. That only gave me 17 days, which I don't think was fair."

This is the second time a radio communications supplier has dropped Rapid Armored. "Previously, we had Motorola, and they shut down the 800MHz antennas," Ambersini said. "We had to go to another product. Geotek was the only one to offer GPS and AVL. But at least Motorola gave us six months' notice."

At the time, Ambersini said that they had considered Nextel. "It has the name and the product. But it doesn't have GPS and AVL and a messaging system. We would be going from having a lot of info and data into a system where a similar product isn't there."

Ambersini sounded somewhat disillusioned

about being an SMR customer: "It's a touchy industry in that these people are going in and out of business for whatever reason."

Bill Seide, president of Babaco Alarm System, Moonachie, NJ, said that his company had been one of Geotek's largest dealers. "We probably did over 1,400 units in a year, selling 900 to 1,000 ourselves. When the Geotek system worked, it worked excellent. It even saved my van last week. It got stolen, and the system tracked it to the square block where it was. Because the products were new, Geotek had problems of equipment breakage. It was great technology, but it was first-generation. The customers liked it."

Seide said that many of his customers would migrate to Nextel for voice communications and would use another product for tracking that uses CDPD. "It's not as inexpensive as a Geotek, but once they got used to having tracking, customers want to put something on."

Babaco Alarm System did business with Geotek for almost two years. Many of its customers financed the equipment. "Fortunately, the finance company has offered used Nextel radios in exchange for Geotek just so they don't get slammed twice," Seide said. "But it's still a nightmare."

David Burrell is president of Alliance Mobile Technologies, Houston, and a former Geotek dealer who left the fold ahead of the company's collapse. He said that he thought the company's difficulties stemmed from inadequate warranty support, insufficient surge protection in the mobile product, awkward mobile installation requirements, inadequate mobile data capability and pricing mistakes.

"Geotek was not prepared to support an indirect distribution chain," he said. "The company had no policies for compensating dealers for warranty service." He explained that the company willingly would replace failed units, but would not pay for the time that the dealer's technician spent troubleshooting the problem, retrieving the defective unit and installing the replacement.

"It was a finger-pointing problem," he said. "Geotek would say, 'Just bring the unit back, and we'll give you a new one.' But what about my technician time? Meanwhile, we were running work orders daily to handle problems."

Regarding product design, Burrell said that the mobile product had a design more suitable for a desktop unit because it was susceptible to failures caused by power surges and interruptions common to vehicular power

sources. He said that with power surges or failures, the unit ID number residing in software would be lost, rendering the mobile inoperative. "With mobile units, the ID properties of the radio must be in the firmware so you don't lose ID in the field," he explained.

Regarding the awkward installation, Burrell said that any unit with two mobile antennas plus a GPS antenna was clumsy to install. "That's a design problem," he said.

The former dealer said that he was unimpressed with the product's mobile data capability, characterizing it as nothing more than an alphanumeric bulletin board. "There were no networking capabilities," he explained. At one point, they tried to create an ASCII gateway to fool a printer so the data messages could be printed. "They may have had data emissions over the network, but they never should have called themselves 'mobile data.' It is too far away from what we've come to know as mobile data," he said.

Speaking about Geotek's pricing, the dealer said that the company seemed to apply cellular-like pricing to two-way radio customers, meaning, relying on airtime charges to subsidize equipment pricing. He described the cellular pricing approach as "Give away the razor; sell the razor blades." In contrast, he said that two-way radio customers were willing to pay for a good product and to be billed for the "extras."

The dealer said that the FHMA technology delivered audio with a "digital warble." Also, at least in his area, the system was not configured for hand-offs, so customers using the telephone interconnect feature to make mobile phone calls would be cut off when they left a given antennas site's coverage area. "Customer comfort level changed drastically right out of the box," he said.

Burrell said that Geotek, with its parent company being in Israel, had a lack of communication and understanding of the U.S. market, and it was slow, clumsy and unresponsive. "It was just not what the U.S. market wanted," he said. "It was a nightmare for the customer and for the dealer."

It's unfortunate all around for Geotek to be leaving the business. Its customers, employees, dealers and suppliers all lose in the process. Also, it was good to have a company such as Geotek provide some competition in the SMR network business. Fortunately, other companies in that business are on the rise, so alternatives will continue to be available.

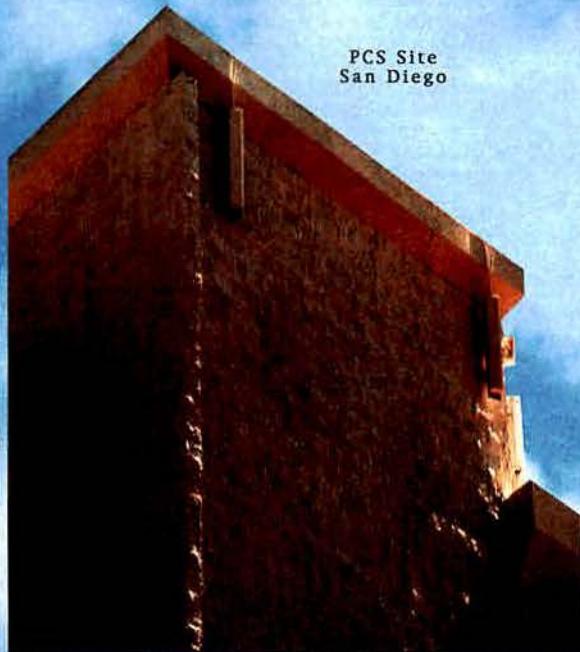
Don Bishop

A secure avenue into wireless utopia ...

Ponder for a minute ...

Information superhighways, on-ramps, speed bumps. Webs of destruction and deceit. Who has time for that?

Remember what got you here. No gimmicks, no monkey business; just solid RF design strategies coupled with selecting the best infrastructure on the market.



At DAPA we offer a most comprehensive product line of site antennas, keeping in line with RF planning, aesthetics and zoning restrictions. We concentrate on a proven metal strip-line feed technology, unlike any other. It is proven to produce continuous peak performance, repeatability and peace of mind.

Not to mention our approved vendor status in cellular and PCS networks around the globe, including the first operational PCS system in the United States.

Oh yeah, and don't forget to tangle with us on the web, <http://www.dapacom.com>, where you can get the latest in product developments, antenna data, patterns, and spec sheets.

Ponder no longer.

DAPA[®]



BEYOND YOUR WIRELESS DREAMS[®]

DAPA Communications, Inc. • Allegany, New York 14706 USA

Int'l Tel +1 716 373 7228 • Int'l Fax +1 716 373 5758 • <http://www.dapacom.com>

Circle (13) on Fast Fact Card

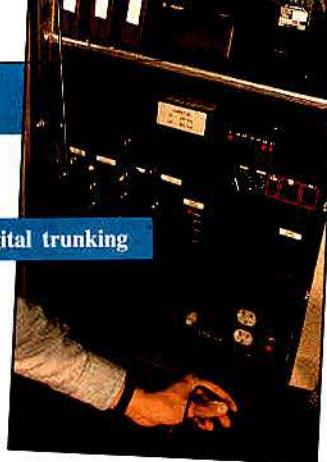
NEXT MONTH - JANUARY 1999

FEATURES AND NEWS: digital trunking; network technology for 220MHz; antenna multicouplers; comparing battery chemistries; trade association news roundup.

PLUS: product/services showcase; Robert H. Schwaninger's "In the Public Interest"; Don Bishop's editorial; product focus: connectors.

AND IN THE MONTHS TO COME: towers; remote monitoring; mobile data and telemetry; IM/EMI issues; interoperability; UHF trunking; IWCE preview; 800MHz trunking; solving propagation problems.

Digital trunking



REGULATORY CONSULTANT

Robert H. Schwaninger Jr., *Brown and Schwaninger, Washington, DC*

EDITORIAL ADVISORY BOARD

John Abbey, *The Abbey Group*
Gene A. Buzzi, *Omnicom Telecommunications Engineering*
Jack Daniel, *The Jack Daniel Company*
Gary David Gray, P.E., *Orange County Communications*
Frederick G. Griffin, P.E., *Frederick G. Griffin P.C.*
Jim Hendershot, *Radio Design Group*
Samuel J. Klein, *Cellular Design*
S.R. McConoughey, P.E., *Mobile Communications Consulting*
Art McDole, *Salinas, CA*
Tony Sabino, *Regional Communications*
Herb Sachs, *Herb Sachs Consulting*
Robert C. Shapiro, P.E., *Strategic Telecommunications*
Leon Spencer, *Exxon Computing Services Company*
Gregory M. Stone, Ph.D., *Quantum Radionics*
Raymond C. Trott, P.E., *Trott Communications Group*
William A. Wickline, P.E., *Mentor, OH*

ADVERTISING SALES OFFICES

OVERLAND PARK, KANSAS

Joyce Bollegar, 913-967-1840,
East Region (including Eastern Canada)
Fax: 913-967-1901
Email: joyce_bollegar@intertec.com

Dawn Rhoden, *Classifieds*,
913-967-1861, Fax: 913-967-1735

Lori Christie, *List Rental Services Representative*,
913-967-1875, Fax: 913-967-1897
9800 Metcalf Avenue
Overland Park, KS 66212-2215



EDITORIAL

Don Bishop, *Editorial Director*
David Keckler, *Features Editor*
Nikki Chandler, *Associate Editor*
Emily Reid, *Editorial Assistant*
Harold Kinley, C.E.T., *Contributing Editor*

DESIGN

Scott Dolash, *Associate Art Director*

BUSINESS

Cameron Bishop, *President, Communications & Entertainment Division*
Mercy Contreras, *Group Publisher*
Patricia Zahner, *Director of Marketing*
Karen Clark, *Marketing Services Supervisor*
Sheryl Ammon, *Advertising Production Coordinator*
Nancy Hupp, *Director, Corporate Advertising Services*
Patti Lee, *Classified Advertising Coordinator*
Tom Cook, *Group Senior Managing Editor*
Doug Coonrod, *Corporate Creative Director*
Stephanie Hanaway, *Division Director of Marketing*

PRIMEDIA Intertec

Raymond E. Maloney, *President and CEO*
Nick Cavnar, *Vice President of Circulation*
Barbara Kummer, *Circulation Director*
Julie Neely, *Circulation Manager*
Customer Service, 800-441-0294 or 913-341-0294
PRIMEDIA Information Group
Curtis Thompson, *President*
PRIMEDIA Inc.
William F. Reilly, *Chairman and CEO*
Charles McCurdy, *President*
Beverly C. Chell, *Vice Chairman*

SANTA ROSA, CALIFORNIA

Dennis Hegg, *West region (including Alaska, Hawaii and Western Canada)*
Phone: 707-541-3763, Fax: 707-541-3721
Email: dennis_hegg@intertec.com
3428 Mendocino Ave.
Santa Rosa, CA 95403

ENGLEWOOD, COLORADO

Mercy Contreras, *Group Publisher*, 303-220-4245
Phone: 303-793-0448
Fax: 303-793-0454
5660 Greenwood Plaza Blvd., Suite 350
Englewood, CO 80111

OXFORD, ENGLAND

Stephen Bell, *International*
Phone: +44 181 286 8889
Fax: +44 181 286 8898
P.O. Box 98
Worcester Park, Surrey, KT4 8WB
United Kingdom

CORRESPONDENCE: Editorial correspondence should be addressed to P.O. Box 12901, Overland Park, KS 66282-2901, tel. 913-341-1300; fax: 913-967-7250; mrt@intertec.com

MOBILE RADIO TECHNOLOGY provides technical information to dealers; to private wireless, public safety, public service, community repeater, SMR, ESMR, paging, cellular and PCS system operators; mobile radio equipment manufacturers; manufacturers' representatives, distributors; engineering and consulting firms; national, state and local government and public safety agencies; transportation companies; petroleum and energy products companies; public utilities; and others allied to the field.

PHOTOCOPY RIGHTS: Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by PRIMEDIA Intertec, provided that the base fee of US \$2.25 per copy, plus US \$0.00 per page is paid directly to Copyright Clearance Center, 222 Rosewood Dr., Danvers, MA 01923, USA. The fee code for users of the Transaction Reporting Service is 0745-7626/1998 \$2.25 + \$0.00. For those organizations that have been granted a photocopying license by CCC, a separate system of payment has been arranged. Prior to photocopying items for educational use, please contact CCC at 508-750-8400. Organizations or individuals with large quantity photocopy or reprint requirements should contact Jenny Eisele, 913-967-1966.

BACK ISSUES: Copies of most issues printed within the past two years are available for \$10 per issue; older issues are not. Call customer service at 800-441-0294.

ARTICLE PHOTOCOPIES: Photocopies of individual articles printed since January 1987 may be ordered from UMI at 800-248-0360.

This publication is available from UMI in one or more of the following formats: online, microform, document delivery, and electronically. Call toll free 800-521-0600, Ext. 3781, for more information.

PRIMEDIA
Intertec



Audited circulation.

© 1998 by PRIMEDIA Intertec. All rights reserved.

...POWER ON WITH ASTRON SWITCHING POWER SUPPLIES...



SPECIAL FEATURES:

- HIGH EFFICIENCY SWITCHING TECHNOLOGY SPECIFICALLY FILTERED FOR USE WITH COMMUNICATIONS EQUIPMENT, FOR ALL FREQUENCIES INCLUDING HF.

- HEAVY DUTY DESIGN
- LOW PROFILE
- LIGHT WEIGHT PACKAGE
- EMI FILTER
- MEETS FCC CLASS B

PROTECTION FEATURES:

- CURRENT LIMITING
- OVERVOLTAGE PROTECTION
- FUSE PROTECTION
- OVER TEMPERATURE SHUTDOWN

SPECIFICATIONS:

INPUT VOLTAGE: 90-132 VAC 50/60 Hz OR
180-264 VAC 50/60 Hz
SWITCH SELECTABLE
OUTPUT VOLTAGE: 13.8 VDC

MODEL	CONT. AMP	ICS	SIZE (inches)	WT.(lbs.)
SS-10	7	10	2.3 x 6 x 9	3.2
SS-12	10	12	2.3 x 6 x 9	3.4
SS-18	15	18	2.3 x 6 x 9	3.6
SS-25	20	25	2 7/8 x 7 x 9 3/8	4.2
SS-30	25	30	3 3/4 x 7 x 9 5/8	5
SS-25M*	20	25	2 7/8 x 7 x 9 3/8	4.2
SS-30M*	25	30	3 3/4 x 7 x 9 5/8	5

- * with separate volt and amp meters
- All SS power supplies are available in a RACK MOUNT VERSION (3.5 x 19 x 9 3/8)
- To order Rack Mount Version change SS to SRM (example: SRM-10)



9 Autry, Irvine, California 92618
949-458-7277 Fax 949-458-0826
www.astroncorp.com

calendar

December

9-11—Utilities Telecommunications Summit, sponsored by UTC, Sheraton Bal Harbour, Miami Beach, FL. Contact: 202-872-0030.

February

8-10—Wireless, sponsored by the Cellular Telecommunications Industry Association, Ernest Morial Convention Center, New Orleans. Contact: 847-940-2155.

March

8-9—Specialized Wireless Communications Management Conference, sponsored by AMTA, San Diego Hilton Beach and Tennis Resort, San Diego, Contact: 202-331-7773.
28-31—ENTELEC, sponsored by the Energy Telecommunications and Electrical Association, George R. Brown Convention Center, Houston. Contact: 281-357-8700.

April

28-30—International Wireless Communications Expo, co-sponsored by Mobile Radio Technology, Las Vegas Convention Center, Las Vegas. Contact: 800-288-8606.

May

10-13—Telecommunications Resellers Association Spring Conference and Exposition, San Diego Marriott, San Diego. Contact: 202-835-9898.

June

1-3—Canadian Wireless, sponsored by the Canadian Wireless Telecommunications Association, Vancouver, Canada. Contact: 613-233-4888, ext. 102.
27-July 1—UTC Telecom '99, sponsored by UTC, Nashville, TN. Contact: 202-857-1881.
28-29—AMTA Leadership Conference & Annual Meeting, sponsored by AMTA, ANA Hotel, Washington, DC. Contact: 202-337-7773.

July

14-16—Communications Expo/Show of the Americas, Miami Beach Convention Center, Miami. Contact: Jackie Gonzales, 305-412-9000.
26-28—Telecommunications Resellers Association Summer Carrier Forum, Westin Harbor Castle, Toronto, Ontario, Canada. Contact: 202-835-9898.

August

8-12—International Association of Public-Safety Communications Officials (APCO) National Conference, Minneapolis, MN. Contact: 904-322-2500.

September

23-25—Personal Communication Showcase, sponsored by Personal Communications Industry Association, New Orleans. Contact: 703-739-0300.

October

2-4—Wireless I.T. '99, sponsored by the Cellular Telecommunications Industry Association, Santa Clara, CA. Contact: 202-785-2842.
17-19—TelecomLatina, co-sponsored by Mobile Radio Technology, Miami Beach Convention Center, Miami. Contact: 800-288-8606.

November

10-14—Communications Marketing Conference, sponsored by the Communications Marketing Association, Harvey Hotel, Dallas. Contact: Jack Armstrong, 410-628-9300.
15-16—AMTEX, sponsored by the American Mobile Telecommunications Association, Walt Disney World Village, Lake Buena Vista, FL. Contact: 202-331-7773.
15-16—Fourth International Congress on Commercial Trunked Radio, sponsored by the International Mobile Telecommunications Association, Hilton, Walt Disney World Resort, Orlando. Contact: 202-331-7773.
1-4—Telecommunications Resellers Association Fall Conference and Exhibition, sponsored by TRA, Adams Mark Hotel, Dallas. Contact: 202-835-9898.
19—Radio Club of America Communications Symposium, 91st Anniversary Dinner and Awards Presentation, New York Athletic Club, New York. Contact: Gerri Hopkins, 732-842-5070.

editorial forum

Grease is the word



The closing months of the year are convention-intensive for many of us associated with wireless communications, the last blast before we crawl into our caves, err, cubicles, for the winter, waiting for CTIA to signal the advent of spring.

Conferences and expos are hectic for attendees, choosing from the candy store of sessions and exhibits. For speakers and exhibitors there are myriad pressures: materials that didn't ship, projectors that burn out, mikes that go mute and laptop computers that blink a C-prompt instead of scrolling out the latest market projections. Behind the scenes, keeping the bedlam under control, are the organizers. Since becoming associated with the annual IWCE show in Las Vegas, we at *MRT* have a heightened appreciation for those at other shows who orchestrate room readiness, luncheon seating and menus, speaker substitutions, security, carpet placement,

signage and a lot of other unsung accommodations.

It's enough to make people crazy—which is okay because sometimes crazy works. For the second year running, it's been my privilege to attend the joint meeting of the Texas chapters of the Association of Public Safety Communications—International, the National Emergency Number Association and the Texas Criminal Justice Information Users Group. Texas' APCO chapter, which comprises a plurality of the international membership, started meeting with the 9-1-1 and records management folks about four years ago, creating an annual conference with about 400 attendees and over 40 exhibitors, rivaling some national trade association shows. Even more impressive is that most of this is done by volunteer effort, rather than with a full-time professional staff.

As I said, conferences are enough to make anyone crazy, but these Texans make it work. Not only does the board organize for the attendees, it entertains them, with exhibitor support, at a mini-version of MANAPCO night. This year, in the heart of Lubbock, TX, the hometown of rock 'n' roll legend Buddy Holly, it was a '50s cruiser review. The entire

conference staff performed a full-costume, lip-synched version of songs from the Broadway musical *Grease*. Somehow, during a week of conference and meetings, the organizers found time to rehearse a show for their peers. Luckily for the dispatch community, none of these public safety communications professionals are quite ready to give up their day (or night, or graveyard shift) jobs. But the energy brought to this enterprise is representative of the support for the training, information and forecasting the conference provides.

Email, fax and phone are indispensable ways of conducting business, but they are no substitute for the interpersonal contact afforded at a conference. Particularly at a state or regional APCO meeting, you get a better feel for interference issues, interoperability problems and dispatch solutions at the local level. You get to meet the frontline users of the technology we write about.

Energy and dedication are the grease that make meetings run smoothly. A big, ten-gallon "hats off" to our friends in Texas.

—D.A. Keckler, Features Editor

Foresight.



Hindsight.



**Site Master™
lets you see
potential quality
problems
before your
customers do.**

Customers expect perfection. Better preventive maintenance is the way to deliver it. That's why there's Site Master.

Site Master makes sure small problems don't turn into big ones. It records antenna system signa-

ture characteristics and stores them for comparison over time. Site Master even works in the presence of live site interference. And thanks to Frequency Domain Reflectometry, potential problems can be pinpointed and repaired,

saving time and money. That's what preventive maintenance is all about.

But seeing is believing. For information or to set up a demonstration, call 1-800-ANRITSU today.



Site Master

©1997 Anritsu Company. Site Master is a trademark of Anritsu Company. Sales Offices: United States: 1-800-ANRITSU; Canada: 613-828-4090; Europe: 44-91782-433200; Japan: 81-03-3446-1111; Asia/Pacific: 65-2942400; South America: 55-21-286-9141; <http://www.global.anritsu.com>

Anritsu

One world. One name. Anritsu.

Circle (15) on Fast Fact Card

It's a wrap

By Robert H. Schwaninger Jr.

Ah, the holiday time! Filled with good cheer, peace on earth and visions of twinkling evergreen boughs laden with tinsel and cane. The carols are being played on the electronic spinet, while snowpersons stand guard over the strands of lights running gutter-to-gutter. 'Tis Christmas for all! And it's all so wonderful, isn't it? Well, yes and no.

One of my problems with the holiday season is that it requires that I try to do things for which I have no natural skill. For example, I can't wrap a package. I get the paper and the ribbon and the bow and the tape, and I wind up with this big ball of brightly colored sticky stuff that either falls apart when a snowflake lands on it, or is taped and wrapped so tight that my wife needs the jaws-of-life to get to her new socks.

I know that I'm not alone in this debilitation. I've received gifts from people that are equally abysmal in presentation. One friend of mine just tapes shut a grocery bag around the gift and tells me that "It's the natural look." But then there's those Martha Stewart-wannabes that send you packages that are wrapped to perfection, depicting the entire Christmas Story in a diorama of artistically formed pipe cleaners. I am impressed. I am in awe. I hate them.

So it is with great sympathy that I observe the "wrapping-challenged" and the "tape-impaired." It is too easy to forget that only half the battle is finding the gift. The other half, wrapping the puppy, can be even more daunting. It is from this charitable vantage point that I observe the gifts that the FCC distributes each year, often marveling at the largesse—and quietly questioning the wrapping. Some examples of the FCC's inability to bind its presents are:

The FCC has given the broadcasters a wonderful gift of spectrum to be used for digital television (DTV). But that spectrum

lacks good wrapping. The threat of adjacent-channel interference to UHF systems is extreme because the digital signals don't seem to be able to be contained in their allocated holder. The square-wave rolloff is such that an extremely high-powered DTV station might toss off enough electromagnetic trash to desensitize receivers operating within 3MHz of the fundamental bandwidth for an as-yet undetermined distance. All together

through the mail.

Before I seem like I'm jumping on the FCC too hard (I must remember the Christmas spirit), the inability to wrap gifts to the industry is not restricted to the commission. There are others who walk among us (like the spirits of technology past and future), who have also failed to achieve wrapping skills. Just ask the Motorola Trunked Users Group (MTUG) whose members, at regional

meetings, are complaining to the blue-battled ones that the Motorola IDEN system causes adjacent channel interference to public safety systems using the 800MHz band—and using Motorola radios! It seems that the IDEN system is not well-wrapped, band-wise. First the commercial SMR operators have complained from Christmas tree-to-shining-tree that the Nextel system creates intolerable levels of adjacent interference. Now the public safety users are getting into the chorus of complaining carolers who have discovered that the digital IDEN signal is hanging out of the gift box.

Then there's that Scrooge-like offering of narrowband operations vis-à-vis refarming. Efficiency to be gained by narrowing private radio bandwidth was another present that manufacturers delivered to the industry through the FCC. More channels, more uses, more fun for the whole family! But wait. Those same manufacturers are now claiming that the gift is great, but the wrapping is a little loose. And the package might not be fully adorned for years. The whole wonderful gift is on back order, and we might have to wait until after the millennium for delivery. Gee, Santa can do it in just one night.

The examples of improper decoration continue throughout the industry. Little baubles of opportunity, wrapped in logical thresholds of near impossibility. There's the interactive video and data service (IVDS) and the duty-cycle surprise—all the interactive video you can stuff in a five-second-per-hour-duration box. There's tower construction on federal land, outfitted with all the forestry fees a

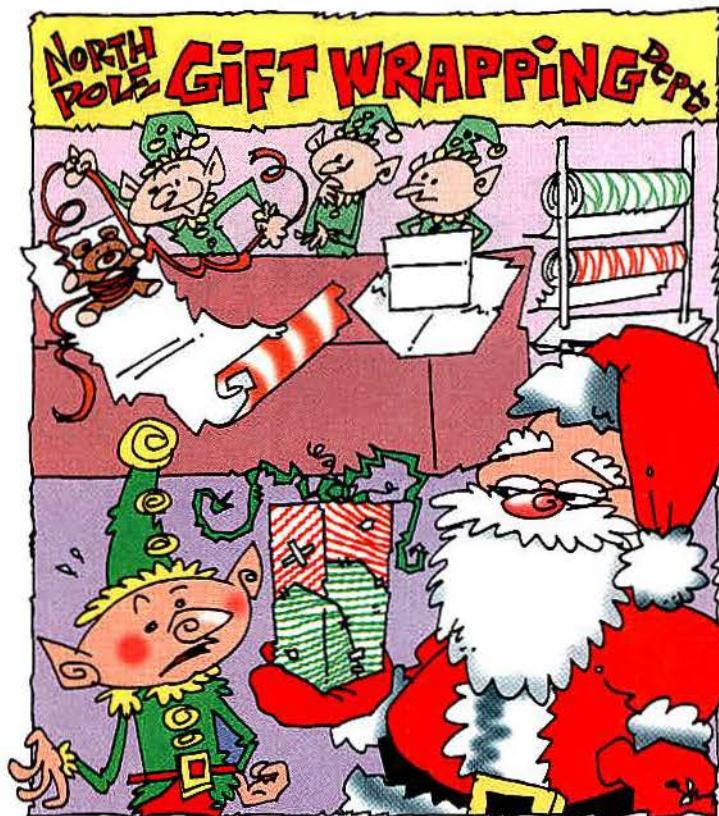


ILLUSTRATION BY JOHN HAYES

"THE NEW GUY USED TO CUSTOM-WRAP PACKAGES FOR THE FCC"

now, like carolers: "Whoops!"

This situation reminds one of the FCC's attempts at geographic licensing of systems. Rather than wrap the licensed operation based on propagation contours from the base stations, the FCC has wrapped its authorizations in borders that crisscross maps. Radio waves don't recognize borders, and the only way to ensure that harmful interference will not occur is to demand propagation information and engineering analysis from licensees. But the FCC has eschewed this wrapping as administratively and aesthetically unpleasant. So, it issues licenses like someone sending a Jell-O mold wrapped in newspaper



Got Lightning Protection?

Don't be too sure.

For decades, operators have used DC-grounded antennas to prevent lightning damage.

Now some manufacturers of polarization diversity antennas say their units are "chassis-grounded."

In brief, they are *not* DC-grounded.

Independent tests compared a DC-grounded Celwave Diversifier Antenna employing hybrid CELlite™ construction, and a chassis-grounded "Brand E" antenna employing a PC board. The Celwave unit handled power surges more than twice as powerful as those that damaged the other.

Don't be burned.

Accept nothing less than DC-grounded antennas in your system.

For a free copy of the lightning protection test results, call 1-800-CELWAVE.



CELWAVE®
DIVISION OF RADIO FREQUENCY SYSTEMS INC.

The clear choice
in wireless.

2 Ryan Road, Marlboro, NJ 07746-1899

Phone: 1-800-CELWAVE

Outside U.S.: (602) 252-8058

Fax (602) 417-2124

www.celwave.com

Circle (16) on Fast Fact Card

©1998 Radio Frequency Systems, Inc.

CELlite is a trademark of Radio Frequency Systems, Inc.

carrier can swallow (Oh *tannenbaum*, Oh *tannenbaum*, the feds are renting your branches ...).

And how long 'til Jacob Marley visits the office of the Telecommunications Development Fund? You can almost hear him howling, "Man-kind should have been our business!" all wrapped in clanking chains of promises that are now forgotten.



that makes sense. But if with greed, shortsightedness, political agendas, administrative agendas, one-upmanship, competitive advantage, manipulated financial statements and taxation, then

The problem is really simple: Anyone can contemplate a gift or service that technology might bring. The truly "gifted" are those people who can deliver the promises in a package

the poor wrapping detracts from the alleged gift.

What if, for example, the FCC said, "We're going to have auctions, but if a small operator already uses the spectrum, we're going to give him a wide-area license in the area of use?" I'm beginning to hear the murmurs of "Peace on earth."

And what if the FCC said, "The gift of the Universal Service Fund has turned out to be a rook for participants and a political boondoggle." Is there any more rare treat than the gift of honesty, particularly if it isn't wrapped in legalese, politician-speak or bull?

For the rest of this month, I'm not going to think about this stuff. I am going to allow myself to be filled with the spirit and joy of the holidays. I'm going to think about the great clients I've got who have given me the gift of trust. I'm going to think about the editors of this fine publication, who let me rant all year long with only a modicum of muzzle. And I'm going to think about the public that, like millions of Tiny Tims, looks to us, just begging for the smallest of service at a fair price, grateful when we deliver what they want at a price that makes sense.

To my readers, I want to wish each and every one of you happy holidays and a prosperous New Year. My monthly gift to you might not always be wrapped so well, but at least it's sincere. ■

Are you in Dispatching Hell?



Vega's Model C-6124

Get out of the heat with Vega's model C-6124, with its cool touch-screen and independent line selection. The C-6124 offers up to 24-line control, instant PTT, and loads of additional features. Any line can be configured as a dedicated 2/4 wire radiocircuit, dial-up access or full duplex conventional PSTN telephone circuit, (simply plug in the appropriate module). Any combination of lines can be set-up in a crosspatch mode. C-6124 with its future expandability will keep you out of the inferno.

VEGA
Signaling Products Group

9900 East Baldwin Place
El Monte, California 91731-2294

Telephone: (626) 442-0782
Toll-Free: 800-877-1771
Fax: (626) 444-1342 • FaxBack:
(626) 444-2017 / 800-274-2017
email: vega_signal@earthlink.net
www.vega-signaling.com

Circle (17) on Fast Fact Card

STOP LIGHTNING DAMAGE.

RF Surge Protectors

Many suppressors available to protect PCS, GPS, Microwave, AM/FM/GIS, and any telecom/datacom equipment.



Ideal for coaxial lines, 4-20mA loops, RS485, RS232, RS422, DDS/56K, TI, ISDN, and 110VAC, 220VAC, 470VAC power lines.

All models available for both
Panel Mount and
DIN Rail Mount.

Visit us on the internet at:
<http://www.CitelProtection.com>
E-mail: citel4u@ix.netcom.com

CITEL

1-800-CITEL-4U
1111 Park Centre Blvd., #340
Miami, FL 33169
(305) 621-0022 • Fax (305) 621-0766

Circle (34) on Fast Fact Card

We've been down this road before.



You'd be surprised what Motorola Communications System Analyzers can be subjected to – and still perform like champs.

Nothing seems to faze these mighty work-horses when it comes to testing conventional and trunked radios, pagers and cellular phones with optimum precision. Not only are our Analyzers built Motorola-tough, they're easy to use. And they're portable, besides.

For more information, we invite you to call us today. Ask about our easy leasing plan – or charging your purchase to your Visa®/MasterCard® charge card. When it comes to rugged dependability, all roads lead to Motorola.

800-505-TEST
818-365-5742 Dept. 439 FAX
www.mot.com/test



MOTOROLA

* and Motorola are registered trademarks of Motorola, Inc. "The Test You Can Trust" and "What you never thought possible" are trademarks of Motorola, Inc. All other marks and trademarks are the property of their respective companies.
© 1997, Motorola, Inc.

What you never thought possible.™

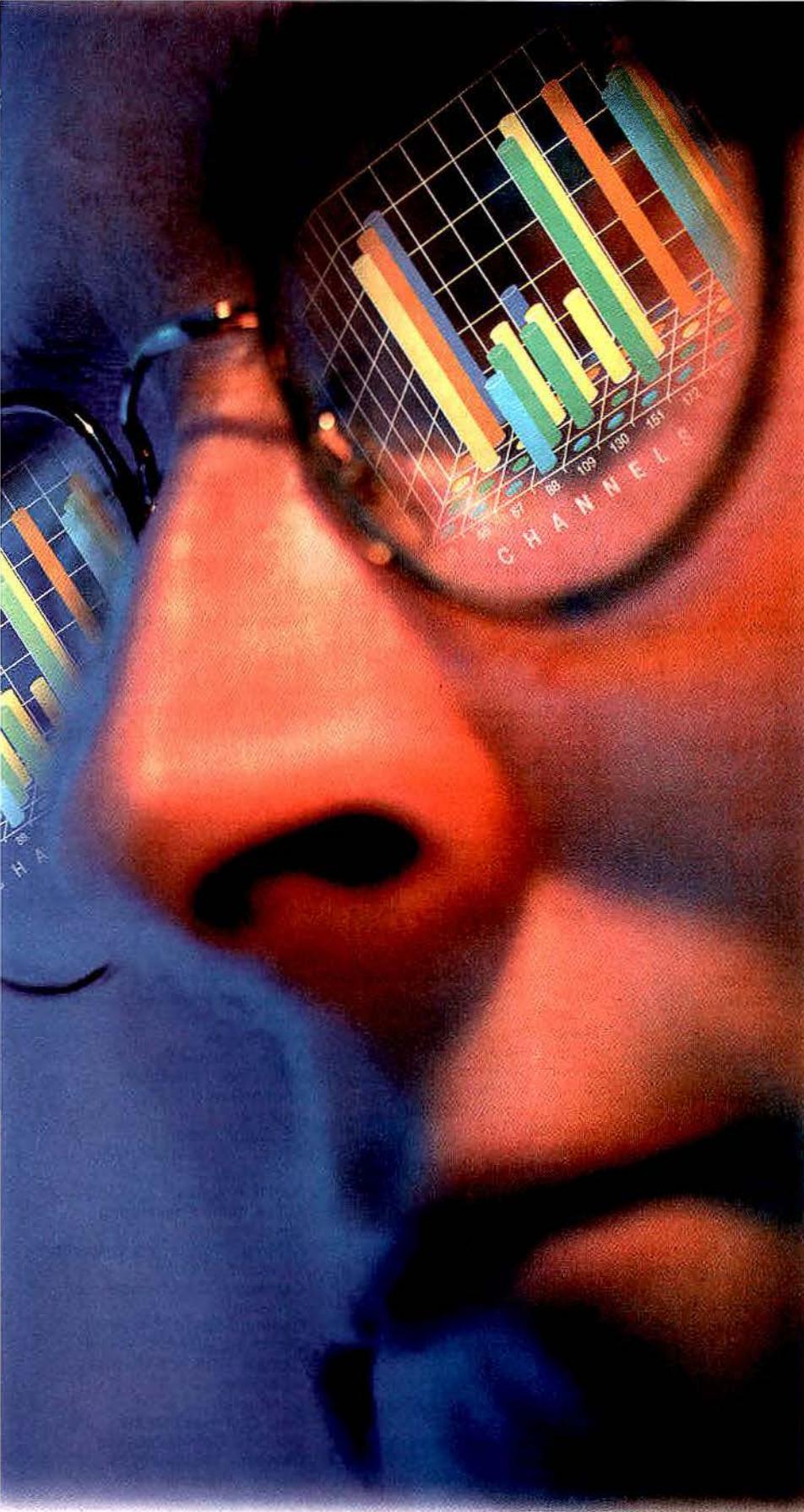
Products Category Index

Category	Page No.	Category	Page No.	Category	Page No.
Air Conditioning for Shelters	16	Lightning and Surge Protectors	32	Business	52
Airtime Billing Equipment	16	Logging Recorders	32	Engineering, Technical and Equipment-related	54
Alarm & Security Systems	16	Message Repeaters (Also see Logging Recorders)	32	Topographic	54
Alternate Energy Sources:		Microphones:		Soldering, Desoldering and Surface-mount Repair Equipment	54
Photovoltaic, Thermoelectric, Wind-driven and Fuel-powered Generators	16	Including Console, DTMF, Ear, Throat, Mobile and Portable	32	Speakers	56
Amplifiers:		Microwave Equipment	34	Station Identifiers	56
RF Power, Mobile and Portable		Mobile Data Systems and Message Switches	34	Status Alarm Systems	56
Amplifier-chargers	16	Mobile Data Terminals	36	Surface-mount Repair Equipment – See Soldering, Desoldering	
Signal Boosters, Bi-directional		Mobile Satellite Equipment	36	SWR Measuring Devices and Meters	56
Amplifiers	16	Mobile and Portable Telephones	36	TCXOs – See Channel Elements	
Towertop	16	Mobile Telephone Systems Equipment	36	Telephone Line Test Meters	58
Antenna Site Equipment:		Modems, RF	38	Test Equipment	58
Cavity & RF Filters; Circulators and Isolators, Hybrid Couplers, Pre-amps, Duplexers & Preselectors; Receiver Multicouplers, Towertop Preamps & Pre-amp Multicouplers; Cavity, Ferrite & Ferrite Hybrid Combiner Multicouplers; Transmitter-receiver Multicouplers	16	Modulation Deviation Meters – See Service Monitors		Tower Obstruction Marking Lights	60
Antennas:		Mounts and Mounting Hardware	38	Towers	60
Base	18	Packet Radio Equipment	40	Transceivers, ACSSB	60
Mobile	20	Pagers	40	Transceivers, Aviation (Hand-held)	60
General	22	Paging Specialties and Accessories	40	Transceivers, FM Conventional, Base, Mobile and Portable	60
Portable	22	Paging Terminals	42	Transceivers, FM Trunking	60
Attenuators & Dummy Loads	24	Paging Transmitters	42	Transceivers, HF SSB	60
Automatic Number Identification	24	Parts	42	Trunked Radio Systems	62
Automatic Vehicle Location (AVL)	24	Power Supplies	44	Uninterruptible Power Systems	62
Batteries, Chargers, Testers & Charger Analyzers	24	Preselectors – See Antenna Site Equipment Programmers, NAM, PROM and Others	44	Used Equipment	62
Cable Fault Locators	26	Racks, Equipment	44	Voice Processing and Message Systems	63
Cable, Connectors, Switches, Supports and Accessories, including Cable Ties and Fiber-optic Material and Equipment	28	Radios – See Repeaters, Transceivers Recorders (Also see Logging Recorders)	46	Voice Recorders – See Logging Recorders Wattmeters and	
Cases for Portable Equipment:		Remote Control, Tone, dc and Others	46	Directional Couplers	63
Radio Harnesses	26	Repeater Control Equipment	46		
Cellular Accessories	26	Repeaters:			
Cellular Antennas	26	Base, Crossband, Mobile and Portable	48		
Cellular Phones	26	RF Filters – See Antenna Site Equipment			
Channel Elements and TCXOs	26	Rural Radio Telephone Systems	50		
Closed-circuit Television Equipment	28	RF Links	50		
Computer-aided Dispatch	30	Scanning Receivers (Scanners)	50		
Consoles	30	Scramblers, Encryption Devices	50		
Converters – See Inverters		Selective Calling – See Signaling			
Crystals	30	Semiconductor Testers	52		
Data Transmission Equipment	30	Service Manuals	52		
Direction-finders	30	Service Monitors and Modulation Deviation Meters	52		
Directional Couplers – See Wattmeters		Shelters	52		
Dummy Loads – See Attenuators		Shielded Enclosures and Accessories	52		
Frequency Counters	30	Signaling and Control Equipment, Analog: CTCSS, DTMF, Two-tone and Five-tone Encoders-decoders)	52		
Generators, Tone and RF Signal	30	Signaling and Control Equipment, Digital	52		
Headsets	32	Simulcast Systems	52		
Insurance	32	SINAD Meters	52		
Intercoms	32	Software			
Interconnects, including Message Accounting	32				
Inverters and dc-dc Converters	32				

Services Category Index

Category	Page No.
Accounting and Billing	63
Brokerage	63
Consultants	63
Others	64
Equipment Repair, Reconditioning: Mobiles, Portables, Pagers and Others	64
FCC Rules and Regulations	64
Leasing and Rental Equipment	64
Satellite Services and Equipment	64
Service Monitor Repair & Calibration	64
Software Development	64
Technician Training	65
Tower Installation	65
Tower Space Rental	65

Email us with comments
at MRT@intertec.com



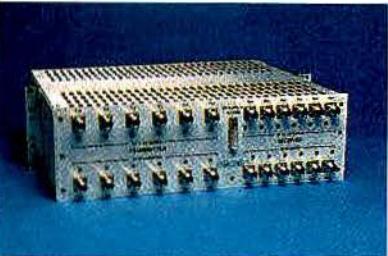
Introducing the CATS 76000.

The only remote cell site antenna monitor that lets you go through channels.

There are many advantages worth reflecting on with the new CATS 76000. It provides you with complete cell-site antenna monitoring and pinpoints antenna feed line fault locations. The CATS 76000 also provides automatic notification if VSWR exceeds user-defined alarm levels.

An even more convincing feature is its ability to measure single-channel transmit power while multiple channels are in use. Operators can identify problems they didn't know existed. No other system verifies and gives you the ability to adjust single-channel radio power in a real-time operational environment. None.

With the CATS 76000, you can diagnose



problems before sending someone out to the site. If a technician must visit a site, he'll go fully prepared to deal with the situation.

What should you do after reading this compelling data? Channel your energies into finding out more about the CATS 76000. Call Narda today at 516-231-1700.

narda
microwave-east

an L-3 communications company

It's Narda to be precise.



Product Directory

Air Conditioning for Shelters

Auto-Comm Engineering



Bard Mfg
FWT
Hill Radio Communications
Lieber
Rittal
Sun Mfg

Airtime Billing Eqpt

Berkeley Varitronics Systems
CyberSym Control Systems
Eastcom Industries
Escotel Software
EZ Soft Business Software/
EZ Pager
IDA
Lynn-Arthur Assoc
John Mitchell
Subscriber Computing
Trident Micro Systems
Zetron

Alarm & Security Systems

Accele Electronics
Andrew
Appropriate Data Communications
ATX Research
Barnett Engineering
Berkeley Varitronics Systems
Berry Controls
Comm-Tech International Communications & Signals
CES Wireless Technologies
Compuquest
CRN Telemetry Devices
CSI/Speco
Danmax Communication
Dataprobe
David Levy
Delcom Industries
DPS Telecom
Eagle Wireless International
Eastcom Industries
EPCOM
Falcon Direct
Freeman Engineering
FWT
Gronel Assoc
Hark Systems
Jack Daniel
Keyware Technologies
King Communications USA
Manon Engineering
MCM Electronics
Merry Electronics
Miracom Technologies
Monicor Electronics
Mountain Communications
Pacific Circuit Design
PageTek
Palstar Bramco
Peninsula Wireless Communications
Polaris Industries
Positron
Racom Products
Richardson Electronics
Solid-State Communications

Tekno Industries
Telemobile
TESSCO
TLP Technologies
Visplex
Whelen Engineering
World Communications Group
Zetron

Alternate Energy Sources: Photovoltaic, Thermoelectric, Wind-Driven & Fuel-Powered Generators

Applied Power
Atlantic Solar Products
Auto-Comm Engineering
Direct Power & Water
Exeltech
Henry Radio
Hutton Communications
Manon Engineering
New World Power Technology
Olympic Radio
Photocomm
Photovoltaic Resources International
Remote Power
Siemens Solar Industries
Solarax
Talley Communications
Teledyne Brown Engineering Energy Systems
Zirco

Amplifiers: RF Power, Mobile and Portable Amplifier-Chargers

Adams Distributing
AML Communications
Amplifier Research
Andrew
AF CommSupply
Antenna Specialists (Allen Telecom)
Auto-Comm Engineering
Beam Radio
Benelec
Cartwright Communications
Celwave
Communication Engineers Communications & Signals
CPI SATCOM Div
DataCom Systems
Datron World Communications
Delcom Industries
DX Radio Systems
Eagle Wireless International
ElectroCom Communication Systems
Electro-Comm Dist
EMR
EPCOM
Fanon Courier
Futurecom Systems Group
General Communications
Global Wireless Communication Products
E Gracey Electronics
Harris/RF Communications Div
Henry Radio
IMT ComSys
Jan Communications & Electronics
Kaval Telecom

Lunar Industries
Marketronics
MFJ Enterprises
Morcom International
Motorola Aftermarket Products
MPD Technologies
Olympic Radio
Powerwave Technologies
Primus Electronics
Secom Systems
Silicon Valley Power Amplifiers
Spectrum Communications
Stuart Electronics
Synetcom Digital
Tadiran
Talley Communications
TelePath
TPL Communications
Tunnel Radio of America
VoCom Products
Webster Communications
Wisco International
C W Wolfe Communications

Amplifiers: Signal Boosters, Bi-Directional Amplifiers

ADC Telecommunications
AML Communications
Andrew
Beam Radio
Cartwright Communications
Celwave
Jack Daniel
Davicom Technologies
Electronic Products
EMR

FUTURECOM SYSTEMS GROUP INC.

Futurecom Systems Group
Global Wireless Communication Products
Manon Engineering
Primus Electronics
Secom Systems
Simulcast Solutions
Talley Communications
TelePath
3dbm
Tunnel Radio of America
TX RX Systems (Member of Bird Technologies Group)
VoCom Products

Amplifiers: Towertop

Ace Antenna
ADC Telecommunications
Allen Telecom
AML Communications
Andrew
AF CommSupply
Antenna Specialists (Allen Telecom)
Auto-Comm Engineering
Beam Radio
Cartwright Communications
Celwave
Communication Engineers Communications & Signals
Comsat RSI/Jefa Wireless Services
Conductus
D&L Communications
Danmax Communication
Davicom Technologies
Decibel Products (Allen Telecom)
Delcom Industries
DH Marketing Manufacturers' Representative
DP Electronics
E A G L E
Eastcom Industries
Electro-Comm Dist
Electronic Products
EMR

FWT
Global Wireless Communication Products
Hazelton
Jack Daniel
LeBlanc Communications
LGP
Lunar Industries
Manon Engineering
Marketronics
Powerwave Technologies
Primus Electronics
Secom Systems
Sinclair Technologies
Sinclabs
Talley Communications



Telewave
Telewave Ltd
TX RX Systems (Member of Bird Technologies Group)
Wacom Products
Webster Communications

Antenna Site Eqpt:

Including Cavity & RF Filters; Circulators and Isolators; Hybrid Couplers, Pre-amps, Duplexers & Preselectors; Receiver Multicouplers, Towertop Pre-amps & Pre-amp Multicouplers; Cavity, Ferrite & Ferrite Hybrid Combiner Multicouplers; Transmitter Receiver Multicouplers

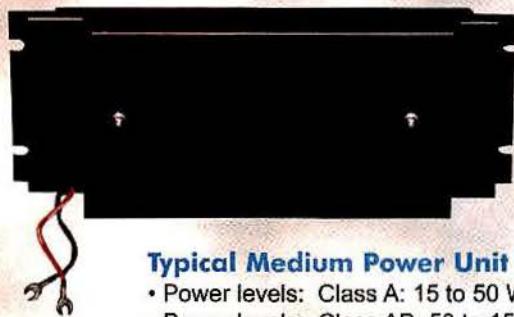
Ace Antenna
Adams Distributing
Advanced Receiver Research
Allen Telecom
Alltel Supply
Alpha Industries
AML Communications
AnchorGuard
Andrew
AF CommSupply
Antenna Specialists (Allen Telecom)
Austin Antenna
Auto-Comm Engineering
Beam Radio
Berkeley Varitronics Systems
Canadian Marconi
Cartwright Communications
Celwave
Communication Engineers Communications & Signals
Comsat RSI/Jefa Wireless Services
Conductus
D&L Communications
Danmax Communication
Davicom Technologies
Decibel Products (Allen Telecom)
Delcom Industries
DH Marketing Manufacturers' Representative
DP Electronics
E A G L E
Eastcom Industries
Electro-Comm Dist
Electronic Products
EMR



NEW!!

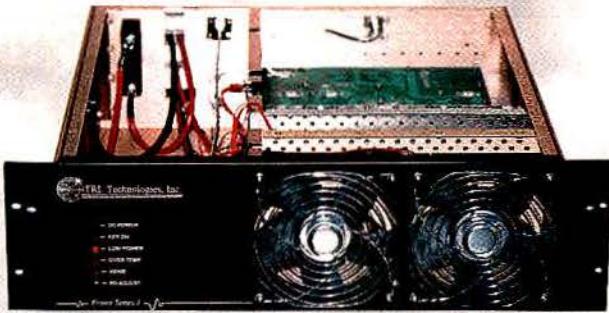
The New *TRL Technologies'* RF Power Amplifiers and Subsystems Class A/AB Analog & Digital Operation

- Lower IMD
- Higher Efficiency
- Proven Quality



Typical Medium Power Unit

- Power levels: Class A: 15 to 50 Watts
- Power levels: Class AB: 50 to 150 Watts
- Size: 19" x 5.20" x 5.25"



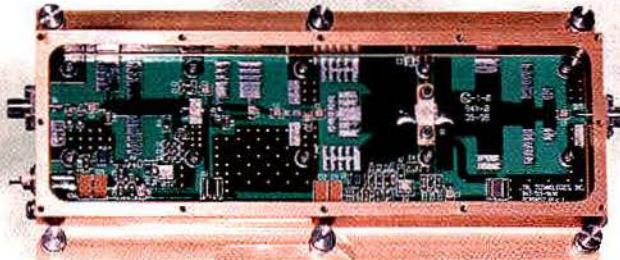
Typical High Power Unit

- Power levels: Class A: 50 to 150 Watts
- Power levels: Class AB: 150 to 500 Watts
- Size: 19" x 5.20" x 16.5"



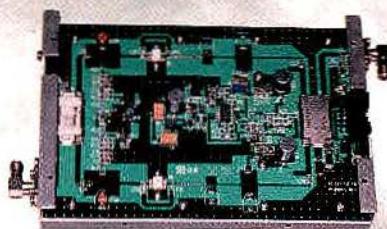
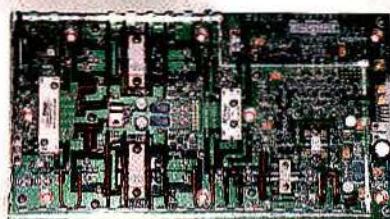
Typical Bi-Directional Amplifiers

- Cellular/DCS/PCS/Trunking
- Power levels: 10 to 100 Watts
- Size: 20" x 16" x 8"



Typical Class A Modular Unit

- Power levels: Class A: 1 to 35 Watts
- Power levels: Class AB: 10 to 100 Watts
- Size: 3.5" x 7.7" x 1"



Let our experienced staff design to your custom specifications. We provide fast design cycles with high quality and reliability to meet your high standards.



TRL Technologies, Inc.

2155 Stonington Avenue
Hoffman Estates, IL 60195

Phone: **847-519-9690** Fax: **847-519-9691**
e-mail: **sales@tritech.com**

Circle (78) on Fast Fact Card

*Call now for
custom designs and
configurations!!*

Visit us on the Web at:
http://www.tritech.com

Environmental Technology
EPCOM
ERI-Electronics Research
Filtronetics
Gabriel Electronics
General Communications
Global Wireless
Communication Products
Hark Systems
Harris/RF Communications
Div
Hite Electronic Sales



The
First
Choice
Wireless
Distribution™

Hutton Communications
Illinois Semiconductor

Jack Daniel
Jan Communications &
Electronics
LGP
Lockheed Martin
Microwave-Narda
Lockheed Martin L-3
Communications Narda
Microwave West
Manon Engineering
Marketronics
Microwave Filter
Motorola Aftermarket Products
Olympic Radio
Optoelectronics
Peninsula Wireless
Communications
Primus Electronics
Pulstar Distributing
Radiall

Radio Control Systems (RCSI)
RELM Communications
Richardson Electronics
Salisbury Engineering
Scala Electronic
Secom Systems
Sharp Communication
Sinclair Technologies
Spectrum Communications
Stealth Network Technologies
Talley Communications
TelePath
Teletech



Telewave
Telewave Ltd
Trilithic

TX RX Systems (Member of
Bird Technologies Group)
Wacom Products
Webster Communications
Zetron

Antennas, Base

AAT Communications
Systems
Ace Antenna
Adams Distributing
AEA Div of Tempo Research
Air Comm

Andrew
Antenex
AF CommSupply
Antenna Specialists (Allen
Telecom)

Antenna World
Antennaco
ArrayComm
Astron Antenna

Austin Antenna
Beam Radio
BearCom LP
Benelec
California Radio
Cartwright Communications
Celwave
Centurion Communications
Childs Antennas
Comark Distributing
Communications & Signals
Comprod Communications
Comsat RSI/Jefa Wireless
Services

Comtelco Industries
CSS Power

Cushcraft
D&L Communications
D&R Associates

Danmax Communication
DAPA
Dataradio

Davicom Technologies
Decibel Products (Allen
Telecom)

Delcom Industries
DH Marketing Manufacturers'
Representative

DP Electronics
Electro-Comm Dist
Electronic Products

EMR
EPCOM
Ericsson
ExCellular Communications
Falcon Direct
Gabriel Electronics
General Communications
Global Wireless
Communication Products

E Gracey Electronics
Harris/RF Communications
Div

Hazeltine
Hill Radio Communications
Richard Hirschmann of
America

Hite Electronic Sales
Huber + Suhner

Hutton Communications

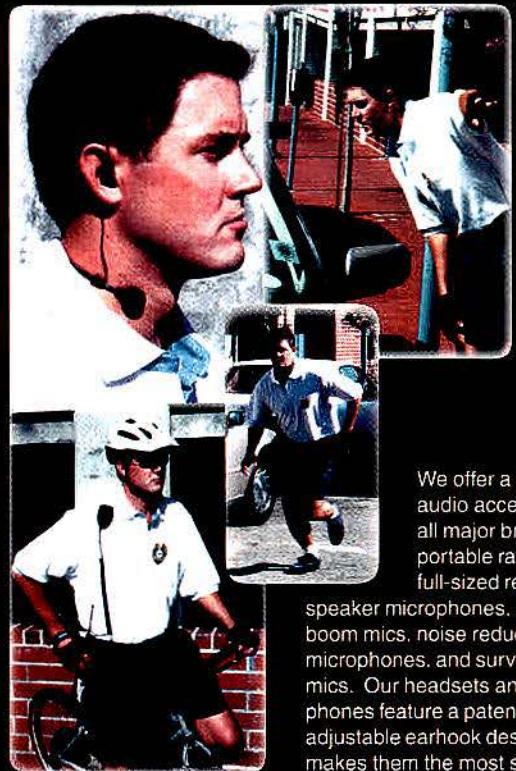
Inwave

Jack Daniel
Jan Communications &
Electronics

Larsen Electronics
Latcom

Lett Electronics
Manon Engineering
Marketronics

Maxrad
MCM Electronics
Mechem Electronics
MFJ Enterprises



PRYME® Radio Products

Audio Products

For your low profile or clandestine communications needs, the PRYME Radio Products line of audio accessories by PREMIER Communications has the right microphone for the job.

We offer a full line of audio accessories for all major brands of portable radio, including full-sized remote

speaker microphones, light duty boom mics, noise reducing throat microphones, and surveillance mics. Our headsets and earphones feature a patented, adjustable earhook design that makes them the most secure and comfortable on the market today.



Our accessories are designed with maximum flexibility in mind. They can be easily adapted to a wide variety of uses and can be operated with ease while wearing safety equipment. Our boom and throat microphones can even be operated with a remote Push To Talk switch, making bicycle mobile operation easier and safer than ever before.



PREMIER Communications Corp.

480 Apollo St. #E * Brea, CA 92821
Phone: 714-257-0300 * Fax: 714-257-0600

Dealer Inquiries Welcome 1-800-666-2654

Visit us on the web at <http://www.pryme.com>

Circle (8) on Fast Fact Card

The Cure for Your Battery Headaches



It's not your batteries that are giving you headaches, it's your charger! **ACT** relieves the pain of complicated battery maintenance, long charge times, memory effect and constant battery replacement.

Using revolutionary, patented Dynamic Electrochemical Waveform™ technology, **ACTivators** condition as they charge, eliminate memory effect and charge

batteries to maximum capacity every time.

Using an **ACTivator**, you can charge batteries in as little as 30 minutes and make them last up to five times longer. It's fast, powerful and painless.

Call today to take advantage of our free, 30-day trial and see how fast your battery headaches disappear.

800-606-6452 / www.actcharge.com



680 Engineering Drive • Suite 180
Norcross, GA 30092 USA
Phone 770-582-0001 • Fax 770-582-0003
www.actcharge.com

Circle (9) on Fast Fact Card

Mobile Mark
 Monicor Electronics
 Morcom International
 Motorola Aftermarket Products
 Motorola Land Mobile
 Products Sector
 NCG/COMET Antenna
 New-Tronics Antenna
 NSI Communication
 Olympic Radio
 PMC Assoc
 Primus Electronics
 Procomm USA
 Pulstar Distributing
 Radio Wholesale
 RF Products
 Scala Electronic
 Schaefer Radio
 Secom Systems
 Sinclair Technologies
 Spilsbury Communications Div
 of Racal Canada

Stealth Network Technologies
 Stuart Electronics
 Talley Communications
 TelePath
 Telewave
 Telewave Ltd
 TESSCO
 TX RX Systems (Member of
 Bird Technologies Group)
 Les Wallen USA
 Webster Communications
 Wisco International
 World Communications
 Group
 Xertex Technologies
Antennas, Mobile
 AAT Communications
 Systems
 Accele Electronics
 Ace Antenna
 Adams Distributing

AEA Div of Tempo Research
 Air Comm
 Allgon Mobile
 Aluma Tower Company
 Antenex
 AF CommSupply

 Antenna Specialists (Allen
 Telecom)
 Antenna World
 Astron Antenna
 Austin Antenna
 Beam Radio
 Benelec
 California Radio
 Cartwright Communications
 Cellular Accessory
 Warehouse

Cellular Solutions
 Centurion Communications
 Childs Antennas
 Com-Rad Industries
 Comark Distributing
 Communications & Signals
 Comprod Communications
 Comsat RSI/Jefa Wireless
 Services
 Comtelco Industries
 CUSHCRAFT
 D&L Communications
 D&R Associates
 Danmax Communication
 Dataradio
 Davicom Technologies
 David Levy
 Decibel Products (Allen
 Telecom)
 Delcom Industries
 DH Marketing Manufacturers
 Representative
 Electro-Comm Dist
 Electronic Products
 EMR
 EPCOM
 ExCellular Communications
 Falcon Direct
 General Communications
 Global Wireless
 Communication Products
 E Gracey Electronics
 Harris/RF Communications
 Div
 Richard Hirschmann of
 America
 Hutton Communications
 Intek Global (Formerly Midland
 Land Mobile Radio)
 Inwave
 Jan Communications &
 Electronics
 Larsen Electronics
 Latcom
 LBA Technology
 Lett Electronics
 Lund Industries
 Manon Engineering
 Marketronics
 Maxrad
 MCM Electronics
 Mechem Electronics
 MFJ Enterprises
 Mobile Mark
 Monicor Electronics
 Morcom International
 Motorola Aftermarket Products
 Motorola Land Mobile
 Products Sector
 Mountain Communications
 NCG/COMET Antenna
 New-Tronics Antenna
 Northpoint Communications
 Products
 NSI Communication
 Olympic Radio
 ORA Electronics
 BearCom LP
 PMC Assoc
 Primus Electronics
 Procomm USA
 Pulstar Distributing
 Radio Wholesale
 RF Products
 RFS Cablewave Systems
 Schaefer Radio
 Secom Systems
 Shinwa Communications of
 America
 Sinclair Technologies
 Smith Communications
 Service
 STI-CO Industries
 Stuart Electronics
 Talley Communications

RELIABILITY!

Walking the Talk at Samlex

Samlex models SEC 1212 and SEC 1223

First, we build in reliability, then we back it up with this



If your power supply doesn't have a 3 Year Warranty...Why Not?



The New Standard in Base Station Power Supplies



Custom designed radio cabinets integrate
 your mobile radio and power supply to
 create a functional and attractive desktop
 base station unit.

- UL Listed to U.S. and Canadian Safety Standards
- 3 Year Limited Warranty
- Comply with FCC Part 15 Class B Standards
- Switched Mode Design
- High Reliability
- High Efficiency
- For HF, UHF & VHF Transceivers
- 10 Amp & 23 Amp Models
- Optional Radio Enclosures
- Immediate Delivery
- Competitive Pricing

If safety, performance and value are important issues to you

Call Samlex America, Inc.

1-800-561-5885

Internet : <http://www.samlexamerica.com> ■ Email : samlex@samlexamerica.com

Circle (10) on Fast Fact Card

When Every Second Counts, Rely On Orbacom's TDM-150 CRT-Based Console System For Your Critical Emergency Communications Needs



Shown Above: The Lancaster County, Pennsylvania, 911 Communications Center With Orbacom's TDM-150 CRT-Based Console System.



Easy-To-Use Primary Operating Screen. Resembles Traditional Radio Channel Modules; Control Modules, As Well As Other Displays, Can Be Adjusted To Meet Your Unique Dispatch Operation Conditions.

As an established leader in the industry, with decades of experience in the design and manufacture of sophisticated communications consoles, Orbacom is the name to trust for your community's critical emergency call and response situations. Orbacom's new generation of TDM-150 Communications Control Consoles is not only state-of-the-art, but also sets the stage for efficiently expediting your immediate emergency communications needs, as well as effectively fulfilling your ever-expanding future response requirements. Some outstanding features of Orbacom's TDM-150 include Multi-Level Trunking Interfaces, On-Line Screen Changes,

"Drag & Drop" Instant Screen Creation, Multi-Function Screen Grid, On-Screen Alarm Notifications, Windows™ Applications and many more user-friendly operations. The ultimate bottom line is that you and your community will appreciate knowing that when it comes to protecting life and property, you can depend on Orbacom's technology to help you transmit vital instructions, *when every second counts*. For more information, please call or fax in your request for free literature: 609-829-4455/fax:609-829-6980.

Circle (18) on Fast Fact Card

ORBACOM



1704 Taylors Lane, Cinnaminson NJ 08077 Tel: 609-829-4455 Fax: 609-829-6980

9-1-1

Windows is a registered trademark of Microsoft, Inc.

TelePath
TESSCO
Les Wallen USA
Webster Communications
Wisco International
World Communications
Group
Xertex Technologies

Antennas, General

Ace Antenna
Adams Distributing
Advanced Fox Antennas
AEA Div of Tempo Research
Alltel Supply
Alpha Industries
Aluma Tower Company
Andrew
Antenex
AF CommSupply



Antenna Specialists (Allen Telecom)
Antenna World
Antennaco
Antennas America
Astron Antenna
Austin Antenna
Auto-Comm Engineering
Beam Radio
BearCom LP
Benelec
California Radio
Cartwright Communications
Cellular Solutions
Centurion Communications

Centurion International
Childs Antennas
Comark Distributing
Communication Engineers
Communications & Signals
Comprod Communications
Comsat RSI/Jefa Wireless
Services
Comtelco Industries
Cushcraft
D&L Communications
D&R Associates
Danmax Communication
Datron World Communications
Decibel Products (Allen
Telecom)
Delcom Industries
Dowit Service
DP Electronics
DTC Communications
Earmark
Eastcom Industries
Electro-Comm Dist
Electronic Products
EMR
EPCOM
Ericsson
ExCellular Communications
General Communications
Global Wireless
Communication Products
E Gracey Electronics
Harris/RF Communications
Div
Richard Hirschmann of
America
Hite Electronic Sales
Hulse Enterprises
Hutton Communications
Illumicell
IMT ComSys

Jan Communications &
Electronics
JB Communications
Kaval Telecom
Kenwood Systems Group
Kintronics Labs
Kreckman
Larsen Electronics
LBA Technology
LeBlanc Communications
Lunar Industries
Manon Engineering
Marketronics
Maxrad
MCM Electronics
Metawave Communications
MFJ Enterprises
Microflect
Mobile Mark
Monicor Electronics
Morcom International
Motorola Land Mobile
Products Sector
Mountain Communications
Mouser Electronics
NCG/COMET Antenna
Nearson
New-Tronics Antenna
Norand
Olympic Radio
ORA Electronics
BearCom LP
Paragon Engineering
PMC Assoc
Primus Electronics
Procomm USA
Pulstar Distributing
Rapid Deployment Towers
RF Products
RFS Cablewave Systems
RSI Wireless Communications

Sabre Communications
Scala Electronic
Secom Systems
Sharp Communication
Sinclair Technologies
Sky Probes/Modublox
Smith Communications
Service
STI-CO Industries
Stuart Electronics
Tactical Electronics
Talley Communications
TelePath
TESSCO
Trylon-TSF
Les Wallen USA
Webster Communications
Xertex Technologies
Z-Technology

Antennas, Portable

AAT Communications
Systems
Ace Antenna
Adams Distributing
AEA Div of Tempo Research
Air Comm
Allen Telecom
Allgon Mobile
Aluma Tower Company
Amplifier Research
Antenex
AF CommSupply
Antenna World
Antennaco
Astron Antenna
Austin Antenna
Beam Radio
Benelec
California Radio
Cartwright Communications

If you depend on your batteries, here are a few things we think you should know...

1 Our unique battery processing and reconditioning systems are widely recognized as the very best available. Even the US Military says so, and who's going to argue with them? From the ground up, our system designs are superior in many ways. Simply put, it means we offer you more capabilities, more reliability, for more battery types, with a better, simpler interface than any other system - period. For example, we offer intelligent, *truly simultaneous processing* of up to 252 batteries faster than others process 4!

2 Our technological leadership is thanks in part to our ability to provide custom-designed solutions when customer needs exceed existing industry capabilities. That's how we pioneered the only true reconditioning charger. That's also how we created the only true Smart Battery Processing System. We've been leading the industry since 1986; so don't let the other guys mislead you. As they announce their "industry firsts", we want you to know that they've never even come close to catching up.

3 Our customers report that after using our reconditioning systems, many of their batteries are actually in better shape after 3 years of use than they were new out of the box! This is why our systems often pay for themselves in less than a year. Most people just don't believe it until they see it, so call us today to see how you can benefit from *The BatteryPRO Advantage*.



▲ 28 pack
RAMSystem



When the performance of your batteries can mean the difference between life and death, why would you settle for anything less than the very best?

**BATTERY
PRO**
the life support system
for ALL your batteries.

YEAR 2000
Compliant!

<http://www.batterypro.com>

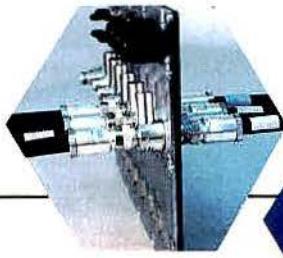
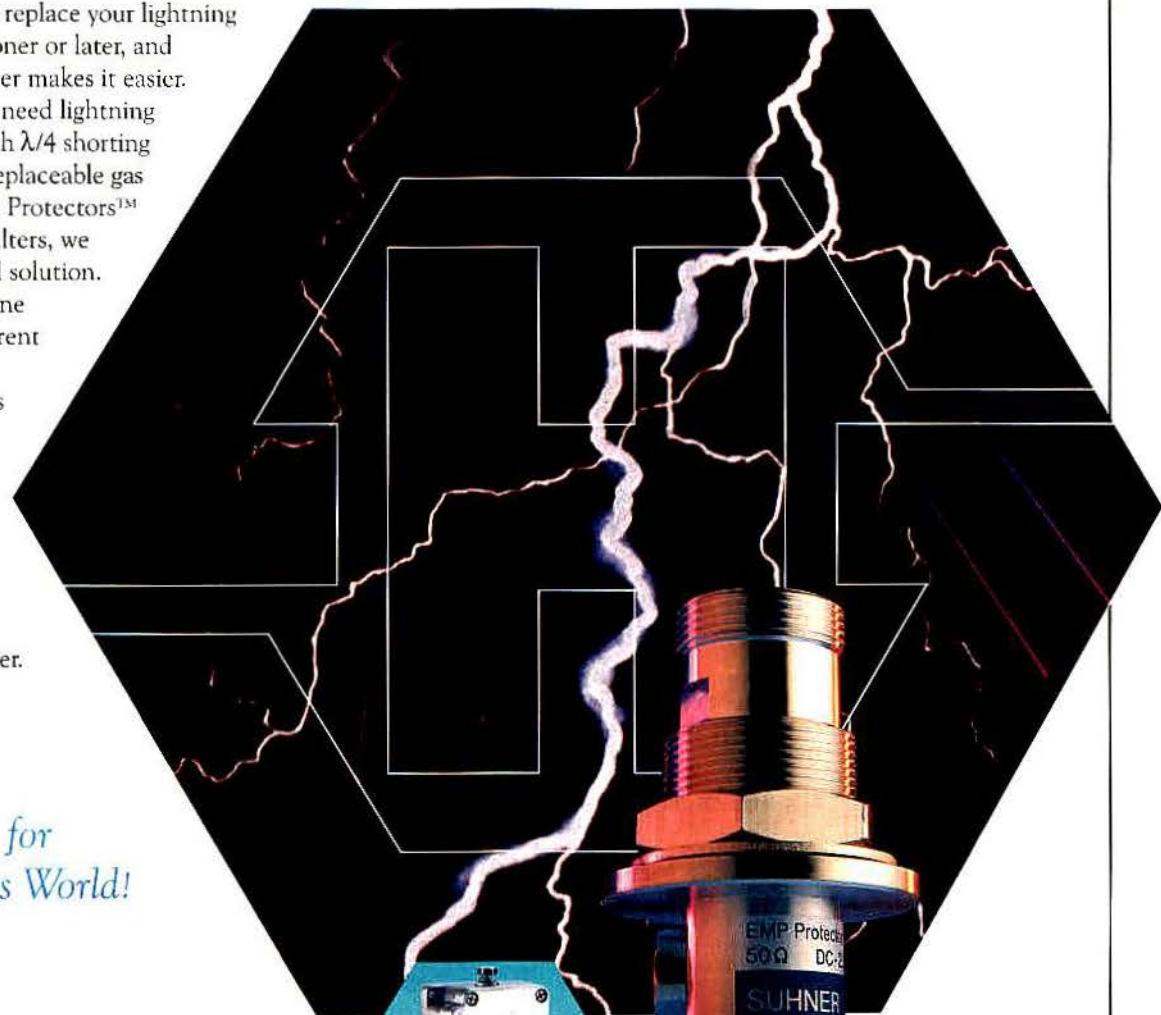
BatteryPRO Systems Inc., 203 - 1 Ave. N.W., Black Diamond, AB, Canada, T0L 0H0, Toll-free: 1-800-661-9401, Ph: 403-933-5393, Fx: 403-933-3233, Email: sales@batterypro.com

Circle (19) on Fast Fact Card

When Lightning Strikes...

You'll have to replace your lightning protectors sooner or later, and Huber + Suhner makes it easier. Whether you need lightning protectors with $\lambda/4$ shorting stubs, easily replaceable gas capsules, Fine Protectors™ or high-pass filters, we have the ideal solution. With nearly one hundred different versions and configurations of lightning protectors, you always feel secure when your equipment is protected by Huber + Suhner.

*Solutions for
a Wireless World!*



HUBER+SUHNER

U.S.A. Phone: 802-878-0555 Fax: 802-878-9880
Canada Phone: 613-596-6646 Fax: 613-596-3001
www.hubersuhnerinc.com

Circle (20) on Fast Fact Card

Cellular Accessory
Warehouse
Cellular Enterprises
Cellular Solutions
Centurion Communications
Centurion International
Childs Antennas
Comark Distributing
Communications & Signals
Comsat RSI/Jefa Wireless Services
Cushcraft
D&L Communications
D&R Associates
Danmax Communication
Davicom Technologies
Delcom Industries
Earmark
Electro-Comm Dist
Electronic Products
EPCOM
ExCellular Communications
Falcon Direct
General Communications
Global Wireless
Communication Products
E Gracey Electronics
Harris/RF Communications
Div
Hutton Communications
Intek Global (Formerly Midland Land Mobile Radio)
Inwave
Jan Communications & Electronics
JB Communications
Larsen Electronics
LBA Technology
Lett Electronics
David Levy
Manon Engineering
Maxrad
MCM Electronics
Mechem Electronics
MFJ Enterprises
Midland Land Mobile Radio
(See Intek Global)
Mobile Mark
Monicor Electronics
Morcom International



Motorola Aftermarket Products
Motorola Land Mobile Products Sector
Mountain Communications
NCG/COMET Antenna
Nearson
New-Tronics Antenna
ORA Electronics
Paragon Engineering
PMC Assoc
Primus Electronics
Procomm USA
Pulstar Distributing
Radio Wholesale
Rapid Deployment Towers
RF Products
Schaefer Radio
Secom Systems
Shinwa Communications of America
Sinclair Technologies
Smith Communications Service
Spilsbury Communications Div of Racal Canada
Stuart Electronics
Talley Communications
TelePath
TESSCO
Les Wallen USA
Wisco International

Xertex Technologies
Attenuators & Dummy Loads
Alcom Electronics
Astrolab
Auto-Comm Engineering
AVA Electronics
Bird Electronic
Cartwright Communications
Coaxial Dynamics
Communications & Signals
Comsat RSI/Jefa Wireless Services
Davicom Technologies
Decibel Products (Allen Telecom)
Delcom Industries
E A G L E
Eastcom Industries
Emerson & Cuming
Microwave Products
EMR
EPCOM
E Gracey Electronics
Hite Electronic Sales
Hutton Communications
Jack Daniel
JFW Industries
Kintronic Labs
LBA Technology
Lockheed Martin
Microwave-Narda
Manon Engineering
MCM Electronics
MFJ Enterprises
Microlab/FXR
Motorola Aftermarket Products
Precision Tube Coaxitude Div
Primus Electronics
Pulstar Distributing
Radiall
Sharp Communication
Talley Communications
Telephonics
Telewave
Telewave Ltd
TESSCO
Trilithic
Trompeter Electronics
Wacom Products
Webster Communications
Wisco International

Automatic Number Identification
Adams Distributing
Auto-Comm Engineering
Autocode
Automation & Electronics Engineering
Beam Radio
Berkeley Varitronics Systems
Cimarron Technologies
Coded Communications
Communications & Signals
CES Wireless Technologies



Communications Specialists
Control Signal
Data Signal
Eastcom Industries
Electro-Comm Dist
EPCOM
Jan Communications & Electronics
Marketronics
Midian Electronics
Norand
Norcomm
PacComm Packet Radio

Systems
Palstar Bramco
Phonetix
Plant Equipment
Pulstar Distributing
Rayfield Communications
Secom Systems
Selectone
Sigtec America
Solid-State Communications
Synetcom Digital
Talley Communications
Tekno Industries
TLP Technologies
Zetron

Automatic Vehicle Location (AVL)

AAT Communications Systems
Adams Distributing
Auto-Comm Engineering
AVL Information Systems
Ball
Beam Radio
Berkeley Varitronics Systems
Cimarron Technologies
Coded Communications
Communications & Signals
CES Wireless Technologies
Corp Ten International
CRN Telemetry Devices
Data Express
DataBurst Technologies
Dataradio
Datumtech
David Levy
Dinet
Eagle Wireless International
EPCOM
IDA
Jan Communications & Electronics
KAVIcomm
Kenwood Communications
King Communications USA
LOCSYS
Magnavox Electronic Systems
Marketronics
Mentor Engineering
Midwest Data Services
Navigation Data Systems
OCS Technologies
PacComm Packet Radio Systems
Raytheon/TMS
Sigtec America
Synetcom Digital
Tekno Industries
Wisco International
Zebryk Engineering
Zirco

Batteries, Chargers, Testers & Charger Analyzers

Accele Electronics
Accutech
Adams Distributing
Adcour
Advanced Battery Systems
Advanced Charger Technology
AdvanceTec Industries
Air Comm
Alexander Batteries
Alger Telecom
Alltel Supply
Andrew
AF CommSupply
Argus Technologies
Atlantic Solar Products
Auto-Comm Engineering
The Battery Connector

Battery Network
Battery Products
BatteryPro Centres
Beam Radio
Berkeley Varitronics Systems
BOLDER Technologies
Cadex Electronics
California Radio
Cartwright Communications
Cellular Accessory Warehouse
Cellular Enterprises
Cellular Solutions
Centurion International
Childs Antennas
Christie Electric
Comm-Net 2000 Comm & Mfg
Communication Engineers
Communications & Signals
Compuquest
Comsat RSI/Jefa Wireless Services
Contact East
Copeland Engineering
CSI/Speco
CSS Power
C W Wolfe Communications
D&L Communications
David Levy
Delcom Industries
DH Marketing Manufacturers' Representative
Direct Power & Water
Dowit Service
Duracell
Eastcom Industries
Electro-Comm Dist
Elenco Electronics
EPCOM
Ericsson
ExCellular Communications
Falcon Direct
Gemini Industries
General Communications
GP Batteries USA
Harris/RF Communications Div

Hawker Energy Products
Hendry Telephone Products
Hite Electronic Sales
HMC-Hub Material
Hutton Communications
Intelligent Technologies
Inwave
Jan Communications & Electronics
JB Communications
JBRO Batteries
Kenwood Systems Group
LaMarche Mfg
Manon Engineering
Marketronics
MCM Electronics
Midwest Data Services
Mobilex
Morcom International

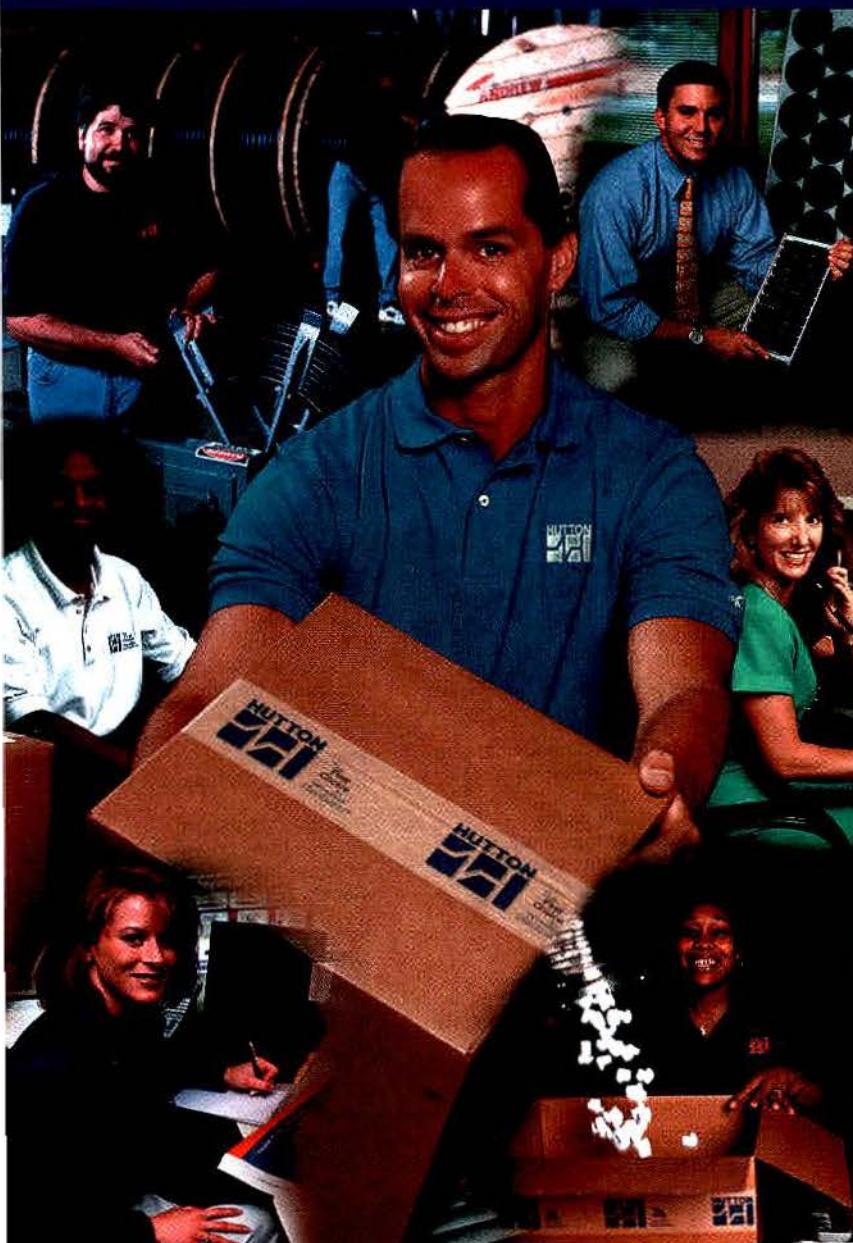


Motorola Aftermarket Products
Motorola Land Mobile Products Sector
Mountain Communications
Multiplier Industries
National Pager Services
NCG/COMET Antenna
Newmar
Norand
ORA Electronics
Panasonic Communications Systems
Plainview Batteries
PMC Assoc



Only one wireless communications distributor has the products, the people and the facilities to serve all your equipment requirements. That's why **Hutton Communications** has become the **First Choice** for many carriers, dealers and self-maintained end users.

THERE REALLY IS NO OTHER WIRELESS DISTRIBUTOR QUITE LIKE HUTTON!



As one of the largest wireless communications and power systems distributors in North America, we provide a wide selection and deep inventory of product, as well as outstanding customer service. And with sales and warehouse facilities close to your location, we provide fast and economical delivery of products where you need them, when you need them.

With our outstanding reputation, quality products, responsive customer service, and sales and warehouse facilities close to your business, there really is no other distributor quite like Hutton. The right products. The right people. The right locations.



HUTTON

The
First
Choice
In
Wireless
Distribution
Hutton Communications, Inc.

888-348-8866
www.huttoncom.com

Atlanta
Denver

Calgary
Harrisburg

Chicago
Seattle

Dallas
Toronto

Circle (21) on Fast Fact Card

Power-Sonic
Primus Electronics
Pulse Power
Pulstar Distributing
QM Enterprises
Quantum Instruments
Radio Wholesale
Samlex America
Secom Systems
Sharp Communication
Smith Communications
Service
A W Sperry Instruments
Statpower Technologies
Stored Energy Systems
Stuart Electronics
Tadiran
Talley Communications
TCC Industries
TelePath
TESSCO
Transportation Safety Devices
TriTech Software Systems
VCP International
Webster Communications
Wenco
Wisco International
W&W Associates
Zirco

Cable Fault Locators

AEA Div of Tempo Research
Alcom Electronics
Alltel Supply
AVO International
Berkeley Varitronics Systems
Brunelle Instruments
Cartwright Communications
Contact East
EAGLE
HMC-Hub Material Company
Jan Communications & Electronics
L-Tronics
David Levy
Metro Tel
Primus Electronics
Riser-Bond Instruments
Secom Systems
Talley Communications
Tektronix
TESSCO

Cases for Portable Eqpt: Radio Harnesses

Adams Distributing
AF CommSupply
AW Enterprises
Beam Radio
Bee Electronics
Cellular Solutions
Comark Distributing
Communications & Signals
Contact East
DH Marketing Manufacturers' Representative
Eastcom Industries
Electro-Comm Dist
EPCOM
ExCellular Communications
Gemini Industries
General Communications
HMC-Hub Material
Hutton Communications
Inwave
Jan Communications & Electronics
JB Communications
Leathersmith
Lone Peak Designs
Manon Engineering
Marketronics
Motorola Aftermarket Products

Mountain Communications
Newmar
Nikolai's
ORA Electronics
PJ Leathercrafts
The Pouch
Primus Electronics
Pulstar Distributing
Radio Wholesale
Raine
Secom Systems
Stuart Electronics
Talley Communications
TelePath
TESSCO
Ultimate Solutions

Cellular Accessories

Accele Electronics
Accutech
Ace Antenna
ACS Wireless
Advance Label & Tag
AdvanceTec Industries
AEA Div of Tempo Research
Aisin World Corp of America
Alexander Batteries
Alger Telecom
Allgon Mobile
Anchor Graphics
Andrew
AF CommSupply
The Antenna Company
Audiovox
Auto-Comm Engineering
Battery Network
Bee Electronics
Berkeley Varitronics Systems
Brightpoint
Cartwright Communications
Cellport Labs
Cellular Accessory Warehouse
Cellular Solutions
Cellular Wholesalers
Centurion International
ChargeGuard
Comark Distributing
Creative Solutions
D&L Communications
David Levy
DataBurst Technologies
DH Marketing Manufacturers' Representative
DW Electrochemicals
Dynatek Communication Dist
Eagle Tech
Eastcom Industries
Electro-Comm Dist
Electronic Products
Elenco Electronics
ExCellular Communications
Gemini Industries
General Communications
GP Batteries USA
Richard Hirschmann of America
Hite Electronic Sales
Huber + Suhner
Hulse Enterprises



Hutton Communications
ICT
Illumicell
Inmetco
Intelligent Technologies
Intercontinental Marketing
Inwave
Jan Communications & Electronics

JB Communications
Jotto Desk
Manon Engineering
MCM Electronics
Merry Electronics
Mobilex
Motorola Aftermarket Products
Mountain Communications
Multiplier Industries
NEC America
ORA Electronics
Pana-Pacific
Panasonic Communications Systems
PanaVise Products
PMI Marketing
Primus Electronics
Pro-Fit International
Pulse Power
Pulstar Distributing
QM Enterprises
Quick Draw Clip Systems
RadioMate
RF Connectors (RF Industries)

Sinclair Technologies Sinclabs
SMC Advanced Products
Stuart Electronics
Super Wireless Warehouse
Syntecom Digital
Talley Communications
TCC Industries
Technostores (Headquarters)
TESSCO
Transtector Systems
Ultimate Solutions
Viziflex Seels
Wireless Connection

Cellular Antennas

Accele Electronics
Accutech
Ace Antenna
Advanced Fox Antennas
Alger Telecom
Allen Telecom
Allgon Mobile
Alltel Supply
Andrew
Antenex
AF CommSupply



Antenna Specialists (Allen Telecom)
Antenna World
The Antenna Company
Astron Antenna
Audiovox
Austin Antenna
Auto-Comm Engineering
Benelec
Brightpoint
Cartwright Communications
Cellular Accessory Warehouse
Cellular Solutions
Cellular Wholesalers
Centurion International
Childs Antennas
Comark Distributing
Comtelco Industries
Cushcraft
D&L Communications
Davicom Technologies
DH Marketing Manufacturers' Representative
Dynatek Communication Dist
Eastcom Industries
Electro-Comm Dist
Electronic Products
EPCOM

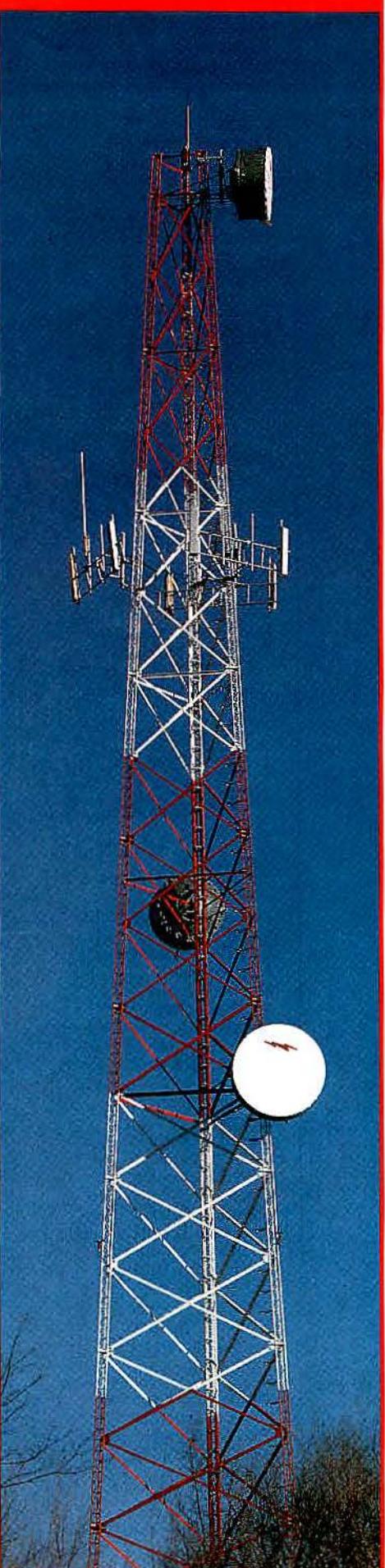
ExCellular Communications
Gabriel Electronics
General Communications
Richard Hirschmann of America
Hite Electronic Sales
Huber + Suhner
Hulse Enterprises
Hutton Communications
Illumicell
Jan Communications & Electronics
JB Communications
Larsen Electronics
David Levy
Lund Industries
Manon Engineering
Marketronics
MCM Electronics
Metawave Communications
Microflect
Mobile Mark
Mountain Communications
ORA Electronics
Pana-Pacific
PMC Assoc
Primus Electronics
Pulstar Distributing
RF Products
RSI Wireless Communications
Scala Electronic
Secom Systems
Sinclair Technologies
Sky Probes/Modublox
Stealth Network Technologies
STI-CO Industries
Stuart Electronics
Talley Communications
Technostores (Headquarters)
VDO-PAK

Cellular Phones

Alger Telecom
Audiovox
Auto-Comm Engineering
Brightpoint
Cellular Enterprises
Cellular Wholesalers
Comark Distributing
CP Communications
D&L Communications
Danmax Communication
Dynatek Communication Dist
Electro-Comm Dist
Escotel Software
ExCellular Communications
General Communications Services
Inmetco
Intercontinental Marketing
Jan Communications & Electronics
Mitsubishi Electronics America
Mountain Communications
NEC America
OKI Telecom
Pana-Pacific
Panasonic Communications Systems
Pulstar Distributing
Quick Draw Clip Systems
Stuart Electronics
Super Wireless Warehouse
Technostores (Headquarters)
TESSCO
Viziflex Seels
Wireless Telecom

Channel Elements & TCXOs

Air Comm
Auto-Comm Engineering
Channel Element HQ
Communication Engineers



No matter
how high,
how far,
how fast,
how clear,
how icy,
how windy,
how wet
or
how many.

PiRod's solutions are **SOLID.**



PiRod can manage your unique tower needs with custom-designed solid rod, free-standing or guyed towers built to your specs and erected where you need them now. Our towers are solid—engineered to handle your most critical problems—and customers tell us that our turnkey design and erection services are pretty solid too. Like our record of providing tower solutions since 1952. So when you need a solid partner for your communication needs, call PiRod. When it comes to towers, there's just nothing hollow here.

Solid Rod, Solid Service, Solid Value

For a free guide to tower selection and a fast, courteous response to your request for a quotation, contact:

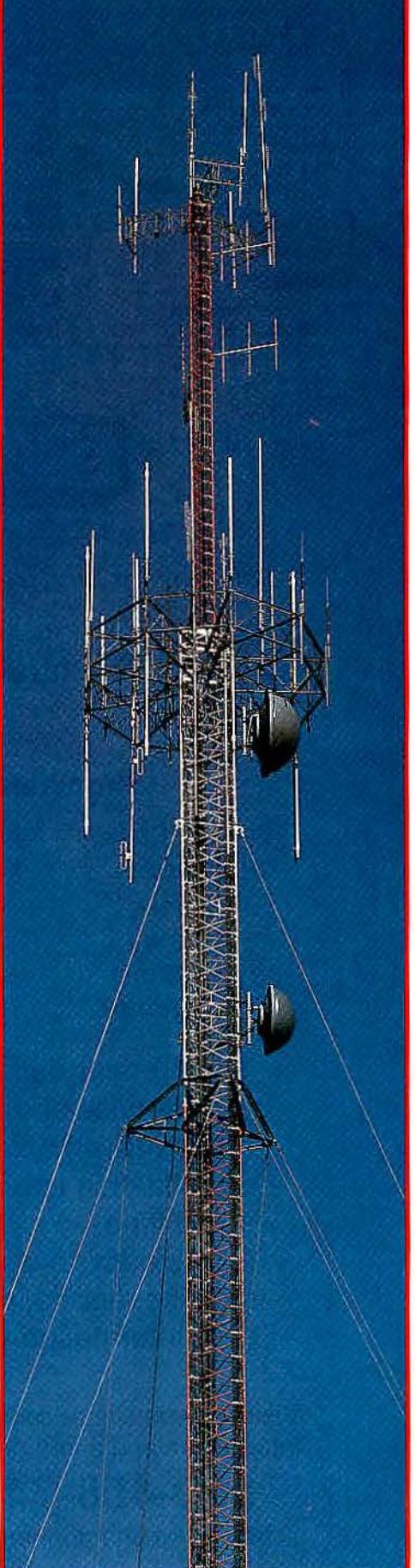


PiROD INC.

Solid Rod, Solid Service, Solid Value

PiRod, Inc.
P.O. Box 128
Plymouth, Indiana 46563-0128
(219) 936-4221
Fax (219) 936-6796
www.pirod.com

Circle (23) on Fast Fact Card



Delcom Industries
Hy-Q International
ICM Communications
Jan Communications & Electronics
Motorola Aftermarket Products
NKK
PCI-Pekaar Communication
Savoy Electronics
Solid-State Electronics
Spectracom
Temex Electronics
C W Wolfe Communications

Closed-Circuit Television Equipment

AAT Communications Systems

Accele Electronics
Alltel Supply
Auto-Comm Engineering
BearCom LP
Berkeley Varitronics Systems
CSI/Speco
Communications & Signals
Delcom Industries
EPCOM
Jan Communications & Electronics
MCM Electronics
PanaVise Products
Polaris Industries
Richardson Electronics
Secom Systems
TESSCO

Cable, Connectors, Switches, Supports

and Accessories: including Cable Ties and Fiber Optic Material and Equipment

Accele Electronics
Adams Distributing
ADC Telecommunications
Alltel Supply
Amphenol Communication & Network Products Div
Andrew
Antenex
AF CommSupply
Antenna Specialists (Allen Telecom)
Antennaco
Astrolab
Astron Antenna

Auto-Comm Engineering
AVA Electronics
Band-It-Index
Baytech
Beam Radio
Benelec
CAIG Laboratories
Cartwright Communications
Celwave
Cesco
Childs Antennas
Comark Distributing
Commscope-General Instrument
Communication Engineers
Communications & Signals
CompuSource
Contact East
CZ Labs
Davicom Technologies
David Levy
Decibel Products (Allen Telecom)
Delcom Industries
Delta Electronics Mfg
DP Electronics



DW Electrochemicals
E A G L E
Eastcom Industries
Electro-Comm Dist
EPCOM
Flexco Microwave Inv
Gabriel Electronics
Hill Radio Communications
Hite Electronic Sales
Huber + Suhner



Software for the Two-way Communications Industry



Peachtree® Accounting Integration

ShopWare Modules Include

Service Calls	Freq Groups	SMR Systems
Job Tickets	Frequencies	C/R Contracts
Projects	Signalling	M/A Contracts
Radios	Depot	Twr Contracts
Fixed Sites	Contacts	Time Sheets
Fixed Equip	Security	Rentals

- ✓ The premier database software to streamline your service shop.
- ✓ Fully Networkable, allowing all users in your organization to access information at the same time.
- ✓ Offers easy-to-use forms and over 60 criteria specific reports, providing all of the up-to-date information you need.

Visit our web site or call for more information and a free demo disk

800-458-3410

<http://www.chargeguard.com>

ChargeGuard, Inc.
400 Highland Avenue
Altoona, PA 16602

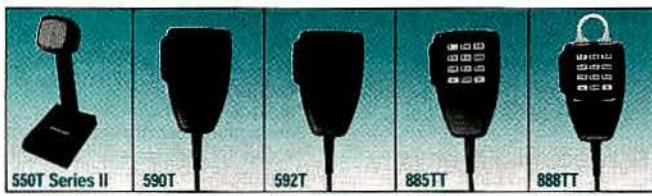


Hutton Communications
Jack Daniel
Jan Communications & Electronics
JB Communications
Kaval Telecom
Larsen Electronics
Marketronics
Mason Electric
MCM Electronics
Meridian Communications
Merry Electronics
MFJ Enterprises
Mobilex
Mouser Electronics
Nearson
Nemal Electronics International
ORA Electronics
Ortel
Polaris Industries
Precision Tube Coaxitude Div
Primus Electronics
Pulstar Distributing
QM Enterprises
Radiall
Radio Wholesale
RF Connectors (RF Industries)
RFS Cablewave Systems
Richardson Electronics
Scala Electronic
Sharp Communication
Sinclair Technologies
Site Advantage
Storm Products
Stuart Electronics
Talley Communications

ALL THE RIGHT CONNECTIONS.



MODULINK® SYSTEM 1



550T Series II
Transistorized base station with split-bar monitor transmit switch

590T
Transistor amplified dynamic

592T
Electret condenser with noise-canceling pick-up

885TT
DTMF with continuous-tone dialing and illuminated keypad

888TT
Aircraft DTMF, noise-canceling and FAA certified

Shure Modulink® handheld microphones connect easily to virtually all popular radio transceivers with no hardwiring. Simply snap the correct cordset into the Modulink microphone and the transceiver. And in just 30 seconds, you're ready to roll.

Modulink® saves service time, reduces downtime and inventory costs, as well as all the quality you've come to expect from Shure.

For more information on how you can make all the right connections with Shure Modulink System 1, call 1-800-25-SHURE.

SHURE

The Sound of Professionals...Worldwide.®

TCC Industries
Telewave
TESSCO
Times Microwave Systems
Transtector Systems
Trilogy Communications
Trompeter Electronics
Tru-Connector
Warner Electric (Bristol Plant)
Webster Communications
Wisco International

Computer-Aided Dispatch

AT&T
Beam Radio
Catcom Systems
CD Communications
Coded Communications
Communications & Signals
CES Wireless Technologies
Comsat RSI/Jefa Wireless Services
Data Express
DataBurst Technologies
Digital Dispatch Systems
Dinet
Eastcom Industries
Falcon Direct
Global Dispatch Technology
Hitech Systems
IDA
Information Radio Technology
Integrated Computer Concepts
KAVIcomm
King Communications USA
Marketronics
MaSys
Mentor Engineering
Midian Electronics
Modems Plus
Navigation Data Systems
OCS Technologies
Orbacom Communications Integrator
Orbacom Systems
PacComm Packet Radio Systems
Pacific Circuit Design
PRC Public Sector
Synergetic Systems
Public Safety Systems (PSSI)
Rayfield Communications
ServiceWare
Sigtec America
Spillman Data Systems
Synetcom Digital
Tiburon
TLP Technologies
TriTech Software Systems
US West Public Safety Group
Wireless Links
Zebryk Engineering
Zirco

Consoles

AAT Communications Systems
Adams Distributing
Atlas/Soundolier
Auto-Comm Engineering
Automation & Electronics Engineering
Avtec
Beam Radio
Catcom Systems
Communications & Signals
CES Wireless Technologies
Concept Seating
Cruisers
DH Marketing Manufacturers' Representative
Dispatch Products
Electronic Products

Evans Consoles
Gai-Tronics
Gamber-Johnson
General Communications
Harris/RF Communications Div
IDA
Interactive Systems & Electronics
Jan Communications & Electronics
Jon/Beau
Jotto Desk
JPS Communications
Lund Industries
Manon Engineering
Modular Communication Systems
Olympic Radio
Orbacom Systems
Penta
PMC Assoc
Positron
Secom Systems
Skaggs Telecommunications Service
Telecommunications Engineering Associates
Transportation Safety Devices
Vega
Watson Furniture Systems
The Winsted Corp
Zetron

Converters— See Inverters, Crystals

Adams Distributing
Auto-Comm Engineering
Bomar Crystal
Cal Crystal Lab
Channel Element HQ
Communication Engineers
Delcom Industries
Electro Dynamics Crystal
EPCM
Frequency Management
General Communications
Hite Electronic Sales
Hy-Q International
Jan Communications & Electronics
K-W Mfg
Kirby Enterprises
Linktronic Systems
M-Tron Industries
Morcom International
Motorola Aftermarket Products
Motorola Land Mobile Products Sector
Nexacom International
Richardson Electronics
Savoy Electronics
Sentry Mfg
Stuart Electronics
Super Wireless Warehouse
Temex Electronics
Wireless Technologies (Crystronics/Pager)
Wireless Technologies Group

Data Transmission Equipment

Adams Distributing
ADC Kentrox WW
ADC Telecommunications
Aerotron-Repco Systems
Aisin World Corp of America
Alcom Electronics
Alligator Communications
Anritsu
Audiovox
Beam Radio
Braley Communication Systems

Cellport Labs
Cellular Solutions
Coherent Communications Systems
Communications & Signals
CES Wireless Technologies
Compuquest
Comsat RSI/Jefa Wireless Services
Converse Technology
Contact East
Data Express
DataBurst Technologies
DataCom Systems
Dataradio
Datron World Communications
DH Marketing Manufacturers' Representative
Digital Dispatch Systems
Dinet
Dynatek Communication Dist
ElectroCom Communication Systems
Electronic Products
EPCM
Escotel Software
Futurecom Systems Group
Genave/NRC
GLB Electronics
GRE America
Hamtronics
Harris RF Communications Div
Henry Radio
Hite Electronic Sales
IMT ComSys
Intraplex
Jack Daniel
JPS Communications
Kachina Communications
Larus
Magnavox Electronic Systems
Marketronics
Maxon America
Mentor Engineering
Metric Systems
Metroplex Mobile Data
Microwave Data Systems
Monicor Electronics
Norand
PacComm Packet Radio Systems
Pacific Crest
PageTap
PCSI
Pyramid Communications
RaCoTek
Real Time Strategies
RF Technology
Secom Systems
Sigtec America
Solid-State Electronics
SONIK Technologies
Speedcall
Synetcom Digital
Talley Communications
Tekk
Telecommunications Engineering Associates
Telemobile
TLP Technologies
Transcrypt International
Western Multiplex
Wireless Links
World Communications Group
Zebryk Engineering

Direction-Finders

Astrolab
Communications & Signals
CES Wireless Technologies
Cubic Communications
Doppler Systems

General Communications
L-Tronics
Rohde & Schwarz
Simrad
SWS Security
Synetcom Digital
Tech Comm
Telephonics
Z-Technology

Directional Couplers—See Wattmeters

Dummy Loads— See Attenuators

Frequency Counters

AEA Div of Tempo Research
Alcom Electronics
B&K Precision/MAXTEC
Beam Radio
Brunelle Instruments
Cal-Scope
Cartwright Communications
Contact East
David Levy
Electronic Products
Elenco Electronics
Fluke
Global Wireless Communication Products
GoComm Wireless (formerly Pagerola)
Helper Instruments
HMC-Hub Material
Jan Communications & Electronics
Marketronics
MCM Electronics
Metro Tel
Morcom International
Motorola Aftermarket Products
Optoelectronics
Simulcast Solutions
Synetcom Digital
TESSCO
ValueTronics International

Generators, Tone and RF Signal

AEA Div of Tempo Research
Alcom Electronics
B&K Precision/MAXTEC
Beam Radio
Cal-Scope
Cartwright Communications
CES Wireless Technologies
Contact East
Conway Engineering
Cromack Industries
David Levy
DH Marketing Manufacturers' Representative
Electronic Products
Fluke
Generac
HMC-Hub Material
IFR Systems
KNS Electronics
Marketronics
MCM Electronics
Metro Tel
Monroe Electronics
Motorola Aftermarket Products
Noise Com/Wireless Telecom Group
PMC Assoc
Rohde & Schwarz
Signalcrafters
Simulcast Solutions
Synetcom Digital

October 2, 1996.

Bob Jensen had
a fire at his mobile
radio repair shop.

He had only a
few seconds to
save things.

Thanks for the vote of
confidence, Bob.

No offense, Fluffy, but the HP 8920A is irreplaceable, too. Because the HP 8920A service monitor provides the edge you need to survive in today's tough business environment. It offers unmatched accuracy (frequency to within .1 ppm). MIL-STD ruggedization means it can withstand shock forces up to 30 g's, temperatures from 0 to 50 °C, and humidity from 0 to 95%. With the legendary reliability of HP (20,000 hrs mean time between failures). Most importantly, the 8920A service monitor offers superior expandability: it can test everything from two-way radios to pagers and cellular technologies. Which is important when you're building a business. Or rebuilding one, as the case may be.

Call 1-800-452-4844,* Ext. 5119. Talk to Charlie or one of our other experts about the HP 8920A and find out how you can get a \$2000 trade-in value for your old service monitor.

* In Canada call 1-800-387-3154, program number TMU310. ©1997 Hewlett-Packard Co. TMSKD707/MRT
Fluffy was not harmed in the making of this ad. She's as rambunctious as ever, and enjoying Bob's new location.

 **HEWLETT
PACKARD**

Talley Communications
Teltone
ValueTronics International
Vega

Headsets

Accele Electronics
Accutech
ACS Wireless
Adams Distributing
Aero
Alltel Supply
AF CommSupply
Auto-Comm Engineering
Beam Radio
California Radio
Cartwright Communications
Cellular Solutions
CeoTronics
Cetacea Sound
Communications & Signals
CES Wireless Technologies
CommuniTech
Creative Solutions
David Clark
Earmark
Eastcom Industries
Electronic Products
EPCOM
ExCellular Communications
General Communications
Global Wireless
Communication Products
Hutton Communications
Inwave
Jan Communications & Electronics
Kenwood Communications
Kenwood Systems Group
Marketronics
Mason Electric
Merry Electronics
Metro Tel
Mobilex



Motorola Aftermarket Products
Motorola Land Mobile Products Sector
New Eagle International
Noise Cancellation Technologies
Olympic Radio
Otto Communications
Primus Electronics
R-Columbia Products
Radio Wholesale
RadioMate
Richardson Electronics
Ropex
Secom Systems
Setcom
Signronics
Sonic Communications
Talley Communications
Telephonics
Television Equipment Assoc
Telex Communications
TESSCO
TwitCo Distributing
VXI

Insurance

Cellnet Communications
Mountain Communications
The Signal

Intercoms

AAT Communications Systems
Alltel Supply

AF CommSupply
Atkinson Dynamics
Atlas/Soundolier
Auto-Comm Engineering
CeoTronics
Cetacea Sound
CP Communications
CSI/Speco
David Clark
Delcom Industries
Electronic Products
EPCOM
Fanon Courier
Gai-Tronics
Jan Communications & Electronics
Nady Systems
Newmar
R-Columbia Products
Richardson Electronics
Setcom
Signronics
Talley Communications
Telex Communications
TwitCo Distributing

Interconnects, including Message Accounting

AF CommSupply
CES Wireless Technologies
Connect Systems
Danmax Communication
Data Signal
Falcon Direct
Gai-Tronics
IDA
JPS Communications
Link Communications
Lynn-Arthur Assoc
Olympic Radio
Pacific Circuit Design
Primus Electronics
S-Com Industries
Secom Systems
Sigtec America
Subscriber Computing
TESSCO
Trident Micro Systems
Zetron

Inverters and DC-DC Converters

Adams Distributing
Alltel Supply
Applied Power
Argus Technologies
Astron
Atlantic Solar Products
Auto-Comm Engineering
Battery Network
Cartwright Communications
Cellular Solutions
Communications & Signals
David Levy
Diplomat Comm Systems
Direct Power & Water
Eastcom Industries
Electronic Products
EPCOM
General Communications
Harris/RF Communications Div
Hendry Telephone Products
Hite Electronic Sales
Hutton Communications
ICT
Jan Communications & Electronics
LaMarche Mfg
Marketronics
MCM Electronics
Motorola Aftermarket Products

Newmar
Photovoltaic Resources International
Power Conversion Products
Primus Electronics
Pulstar Distributing
Richardson Electronics
Samlex America
Statpower Technologies
Stuart Electronics
Talley Communications
TESSCO
Transelectric
Transportation Safety Devices
Tripp Lite
ValueTronics International
Les Wallen USA
Wilmore Electronics

Lightning and Surge Protectors

AC Data Systems
Adams Distributing
Alltel Supply
Andrew
Antenex
AF CommSupply
Antennaco
Argus Technologies
Auto-Comm Engineering
Beam Radio
Benelec
Cartwright Communications
Celwave
Cesco
Citel America
Communications & Signals
CommuniTech
Compuquest
CompuSource
Contact East
Cortana
Cushcraft
Cutler-Hammer
Davicom Technologies
Delcom Industries
Direct Power & Water
Eastcom Industries
Electro-Comm Dist
Electronic Products
EPCOM
FWT
General Communications
Harger Lightning Protection
HMC-Hub Material
Huber + Suhner
Hutton Communications
ICT
Jackson Telecom
Jan Communications & Electronics
Joslyn Electronics Systems
Larsen Electronics
LBA Technology
David Levy
Liebert
Lightning Deterrent
Lightning Eliminators & Consultants
Lightning Master
Lightning Prevention Syst/ WEBTEK
Lyncole XIT Grounding
Manon Engineering
Marketronics
MCG Electronics
MCM Electronics
Microlab/FXR
Motorola Aftermarket Products
Motorola Land Mobile Products Sector
Northern Technologies
PMC Assoc
PolyPhaser

Positron
Precision Tube Coaxitude Div
Primus Electronics
Pulstar Distributing
Richardson Electronics
Samlex America
Scala Electronic
Sinclair Technologies
Site Advantage
Stuart Electronics
Talley Communications
TESSCO
Transelectric Systems
Tripp Lite
Vir James
Les Wallen USA
Warner Electric (Bristol Plant)
Webster Communications
Zetron

Logging Recorders

AAT Communications Systems
Algo Data Systems
Alltel Supply
Am/Comm Systems
Atis
Auto-Comm Engineering
Bogen Communications
CES Wireless Technologies
Compuquest
Converse Information Systems
Dictaphone
Eventide
Fluke
General Communications
JEI Communications Recording System
Manon Engineering
Omnicron Electronics
Phonetix
Racial Recorders
Record/Playtek
Seltronics Eyretel
Spilsbury Communications Div of Racial Canada
Stancil
Swift Computers
Synetcom Digital
TEAC America
Tekno Industries
Transcript International
Trident Micro Systems
VLR Communications
Zetron

Message Repeaters- See Logging Recorders

Message Repeaters

Comm-Net 2000 Comm & Mfg
CES Wireless Technologies
Digital Recorders
Eventide
Olympic Radio
Omnicron Electronics
Racom Products
Seltronics Eyretel
Spilsbury Communications Div of Racial Canada
Zetron

Microphones:

Including Console, DTMF, Ear, Throat, Mobile and Portable

Accele Electronics
Adams Distributing
AF CommSupply
Auto-Comm Engineering
Beam Radio
California Radio

It's Time to Perform.



KENWOOD.
FIFTY YEARS OF
ENGINEERING...
FOR SITUATIONS JUST
LIKE THIS.

The true test of your 2-way radio is in an emergency situation. This is when you know you can depend on Kenwood. All Kenwood radios are durable, with rugged Mil Spec construction. They're easy to use with convenient and versatile features.

Call us about our TK-230/330 portable with a channel group selector knob for choosing new channels on the fly and enunciator tones so you hear all channel changes. Like our full line of mobiles and portables, the TK 230/330 meets or exceeds military and industry standards in 13 categories. You can feel, hear and see the difference Kenwood makes when it counts.



KENWOOD
ALWAYS COMES THROUGH



KENWOOD COMMUNICATIONS CORPORATION • FAX (310) 761-8246 • <http://www.kenwood.net>

CALL FOR YOUR FREE PRODUCT GUIDE: 1-800-950-5005

Circle (25) on Fast Fact Card

Cartwright Communications
Cellular Solutions
CeoTronics
Communication Engineers
Communications & Signals
CES Wireless Technologies
Data Signal
David Clark
DTC Communications
Earmark
Eastcom Industries
Electronic Products
EPCOM
General Communications
Global Wireless
Communication Products
Harris/RF Communications
Div
Hutton Communications
IDA
Inwave
Jan Communications & Electronics

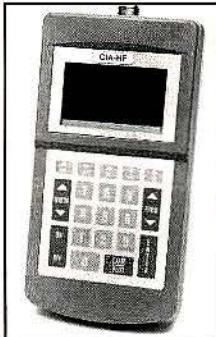
Kenwood Communications
Kenwood Systems Group
Lett Electronics
David Levy
Manon Engineering
Marketronics
Mason Electric
MCM Electronics
Merry Electronics
Midian Electronics
Mobilex
Motorola Aftermarket Products
Mountain Communications
Nady Systems
Otto Communications
Palstar Bramco
Panasonic Communications
Systems
PCI-Pekaar Communication
Peiker Acoustic
Primus Electronics
R-Columbia Products
Radio Wholesale

Richardson Electronics
Secom Systems
Shure Brothers
Signronics
Sigtec America
Sonic Communications
Talley Communications
TelePath
Telephonics
Television Equipment Assoc
Telex Communications
TESSCO
Transcript International
TwitCo Distributing
C W Wolfe Communications
Zetron

Alcom Electronics
Alltel Supply
Alpha Industries
Astrolab
Auto-Comm Engineering
Beam Radio
Berkeley Varitronics Systems
California Microwave-
Microwave Network Systems
Communications & Signals
Comsat RSI/Jefra Wireless
Services
D&L Communications
Digital Microwave
DP Electronics
Electronic Products
Emerson & Cuming
Microwave Products
Gabriel Electronics
Glenayre Electronics
Harris, Farinon Div
Hite Electronic Sales
IMT ComSys
Larus
LeBlanc Communications
Lockheed Martin Microwave-
Narda
MCM Electronics
Microwave Data Systems
Microwave Radio Digital
Moseley Associates
Nutel Electronics
Olympic Radio
P-Com
Peninsula Wireless
Communications
Primus Electronics
RFS Cablewave Systems
Richardson Electronics
RSI Wireless Communications
SFA
Simulcast Solutions
Talley Communications
Telemobile
Telephonics
Tower Structures
TWR Telecom
Western Multiplex

Microwave Equipment

AAT Communications
Systems
ADC Telecommunications



RF Instrumentation Requirements?

Consider This Low-Cost Portable Instrument

CIA-HF™ Complex Impedance Analyzer

\$359.95 plus \$7.50 Shipping & Handling
(Continental USA only)

The new AEA model CIA-HF Complex Impedance Analyzer represents a **major breakthrough** in RF instrumentation. Until now, it was necessary to spend over \$10,000 to obtain a graphical Complex Impedance Analyzer.

With the CIA-HF you can get a **graphical representation of SWR, Impedance, Resistance or Reactance** of an antenna or RF tuned circuit with respect to frequency. The CIA-HF has an internal DDS (Direct Digital Synthesizer) sweep or single frequency generator for excellent frequency accuracy, stability and spurious response. The keypad is a splash-proof membrane type with audible keystroke feedback. Easy for the layman production tester to use in the normal mode, or select the **Extra Features Mode** for access to all the powerful capabilities.

Packaged in a custom rugged plastic hand-held plastic enclosure, the CIA-HF is meant to be used in the field or laboratory with eight internal AA batteries or an external 12 - 16 VDC power source. The unit is small enough to take up a tower to place right at the feed-point of an antenna under test or to use on a lab bench without taking up much space. The graphical Liquid Crystal Display operates in low light or direct sunlight environments.

The frequency range for the standard CIA-HF is **400 kHz to 54 MHz in one kHz steps**. The impedance, resistance and reactance ranges are **0 to 1000 ohms in three ranges**. In addition to the graphical presentations, the CIA-HF will show the following parameters in digital format: Relative Q factor, **2:1 SWR Bandwidth**, Phase Angle (theta), **Minimum SWR** frequency, Sweep width/division, SWR at center frequency (Fc), **Return Loss**, Rough indication of Inductance or Capacitance values, **DC Voltage** (2 to 25 volts), (50 ohm) normalized impedance and the **distance to first short or open** in coaxial cable.

A **serial port** is provided with firmware drivers to communicate with a Personal Computer for purposes of controlling the CIA-HF and for downloading data and graphs to a PC for future reference. Possible applications include but are not limited to **tuning: antennas or RF resonate circuits, feedline stubs, RF filters, MRI circuits, baluns and matching networks**. Use an external loop on the end of a short piece of coax to make the CIA-HF operate like a stable and backlash-free **grid dip oscillator** with a graphical display of the relative Q factor. A beeping tone gives **audible feedback of SWR** at a single frequency for hands-free tuning of an antenna or resonate circuit without even having to look at the CIA-HF.

We realize that to many this instrument may seem too good to be true. Order yours now and take advantage of our **two week money-back guarantee**. For full specs visit our web site or call for our brochure.



AEA

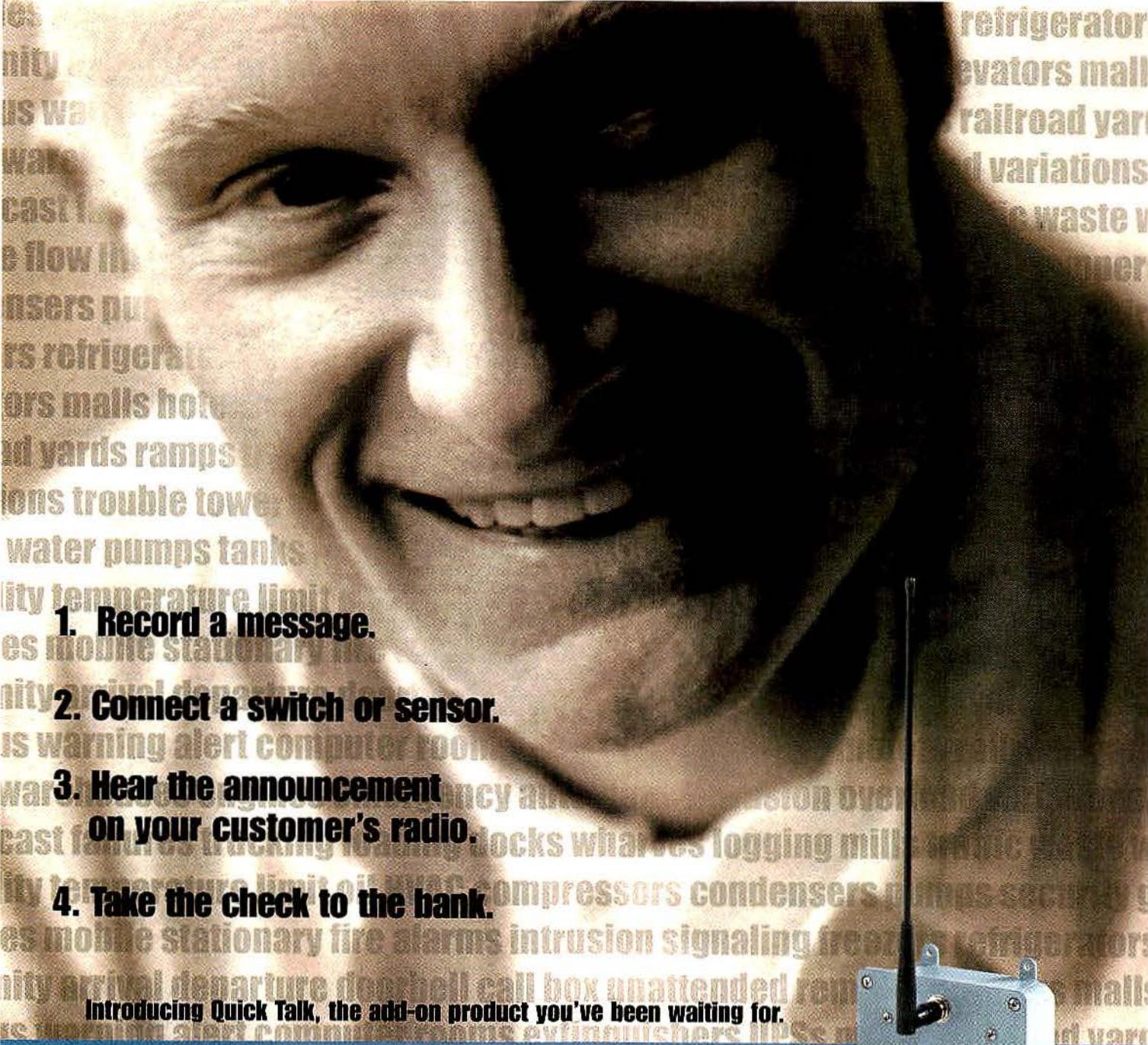
Division of Tempo Research Corporation

1221 Liberty Way, Vista, CA 92083 • Tel: 1-800-258-7805, FAX: 1-760-598-5634

wwwaea-wireless.com, n7ml@imt.net

Mobile Data Systems & Message Switches

Aisin World Corp of America
Baytech
Beam Radio
Braley Communication Systems
Cetacea Sound
Coded Communications
Comm-Tech International
CES Wireless Technologies
D&L Communications
Data Express
DataBurst Technologies
Dataradio
Dinet
Eastcom Industries
ElectroCom Communication Systems
EPCOM
General Communications
Harris RF Communications Div
Hitech Systems
IDA
Information Radio Technology
Integrated Computer Concepts
King Communications USA
Lucent Technologies
MaSys
Mentor Engineering
Metric Systems
Metroplex Mobile Data
Modems Plus



1. Record a message.

2. Connect a switch or sensor.

3. Hear the announcement on your customer's radio.

4. Take the check to the bank.

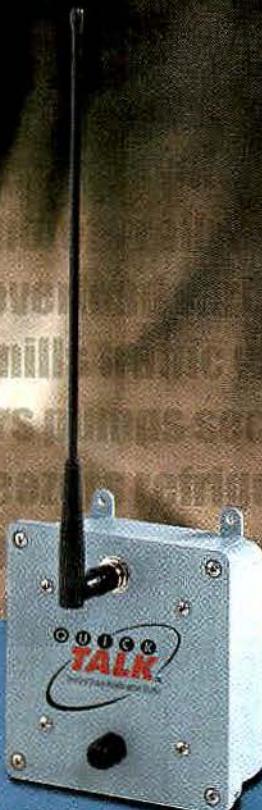
Introducing Quick Talk, the add-on product you've been waiting for.

Now for under \$350.00 MSRP you can put your customer's essential personnel in two places at once. Quick Talk instant voice notification radio responds to any contact closure or analog signal, playing a voice message you record. Quick Talk watches a door, a thermostat, a tank level—anything you put a switch or sensor on—then responds by broadcasting a message to radio users on the customer's system. Put as many Quick Talk units on the system as you'd like; each one will provide 24 hour a day, 7 day a week coverage and make every one of your customer's security, maintenance, or other radio-carrying staff even more productive.

Quick Talk's extensive feature set is completely field programmable using a simple pulse dialing telephone. The rugged Ritron transmitter is programmable and available in

either VHF or UHF frequency bands and supports both sub-audible tone squelch (Quiet Call) and Digital Coded Squelch (DCS).

The heart of Quick Talk is its digital voice recording technology. Because you create your own message, Quick Talk speaks any language you'd like. Quick Talk will find uses in every existing radio system from security to agriculture, to warehousing, to the factory floor. Quick Talk will keep personnel up to date on the status of critical access points, machines, and storage facilities. With Quick Talk the only limitation is your imagination—it's as easy as 1,2,3. For complete information, including industry specific application notes, call Ritron at 1-800-USA-1-USA (1-800-872-1872).



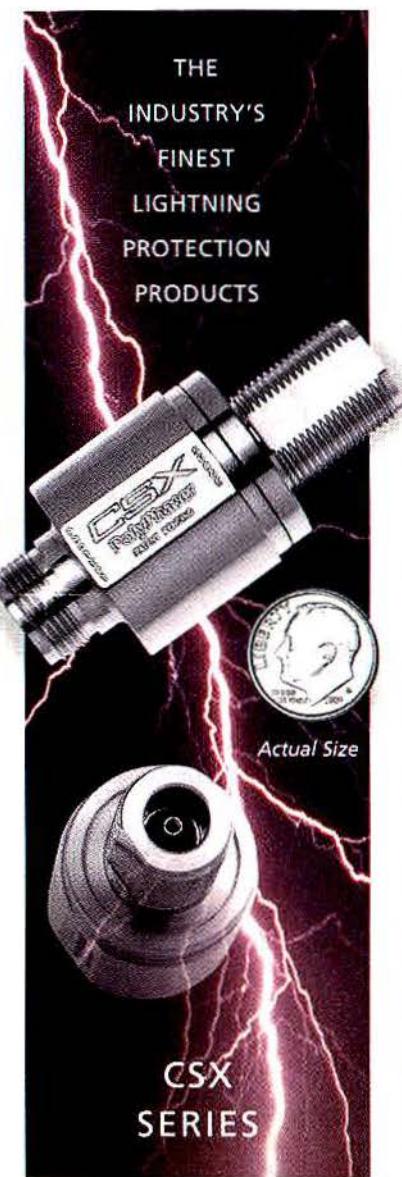
RITRON®

Wireless Communication Systems

made in
USA

Ritron Inc., 505 West Carmel Drive, P.O. Box 1998, Carmel, IN 46032, Phone: 317-846-1201 or 1-800-872-1872, Fax: 317-846-4978, www.ritron.com
©1998 Ritron, Inc. This device has not been authorized as required by the rules of the Federal Communications Commission. The device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

CELLULAR/PAGING PROTECTION



800 MHz to 1.0 GHz Frequency Range

dc Blocked

Low VSWR and Insertion Loss

Maintenance Free

Industry's Best RF Performance

Fully Weatherized Housing

PolyPhaser®
CORPORATION
A SMITHS INDUSTRIES COMPANY

P.O. Box 9000, Minden • Nevada 89423-9000 USA
Tel (800) 325-7170 (702) 782-2511
Fax (702) 782-4476 • www.polyphaser.com

ISO 9001 CERTIFIED

Circle (28) on Fast Fact Card

MX-COM
Navigation Data Systems
OCS Technologies
PRC Public Sector
Synergetic Systems
Public Safety Systems (PSSI)
Real Time Strategies
Sigtec America
Solid-State Electronics
Synetcom Digital
Tekno Industries
Telecommunications
Engineering Associates
Tiburon
Transcrypt International
TriTech Software Systems
US West Public Safety Group
The Warner Group
Zebryk Engineering
Zetron

Services
Eagle Wireless International
ExCellular Communications
IMT ComSys
Jan Communications & Electronics
JPS Communications
Lunar Industries
Magnavox Electronic Systems
Marketronics
Morcom International
Telemobile
Torfino Enterprises

Mobile and Portable Telephones

AdvanceTec Industries
Alger Telecom
Audiovox
Auto-Comm Engineering
Barnett Electronics
Beam Radio

C W Wolfe Communications
D&L Communications
Danmax Communication
Delcom Industries
Ericsson
General Communications
Hite Electronic Sales
Inmetco
Jan Communications & Electronics

Kenwood Communications
Kenwood Systems Group
MACAW Electronics
Magellan Systems
Magnavox Electronic Systems
Marketronics

Morcom International
Mountain Communications
NEC America
NSI Communication
Optaphone Systems
Palstar Bramco
Peiker Acoustic
Positron
R-Columbia Products
Sharp Communication
Smith Communications Service

Super Wireless Warehouse
Tatung Telecom
Telemobile
TelePath
Television Equipment Assoc
TESSCO
Transcrypt International
UNIDEN Private Radio Comm's
Viziflex Seals
Wetec Electronics

Mobile Telephone Systems Equipment

ADC Telecommunications
Aerotron-Repco Systems
Auto-Comm Engineering
Beam Radio
Berkeley Varitronics Systems
Bogen Communications
Braley Communication Systems
Carlson Communications
Comm-Net 2000 Comm & Mfg
CES Wireless Technologies
Comsat RSI/Jefa Wireless Services

CTI
D&L Communications
Danmax Communication
Dataprobe
Direct Power & Water
ESA Telecommunications
Hark Systems
Harris Canada Wireless

Mobile Data Terminals

Air Comm
Auto-Comm Engineering
Beam Radio
Cellport Labs
Cerulean Technology
Cetacea Sound
Citadel Computer
Coded Communications
Comm-Tech International
CES Wireless Technologies
CompuSPEAK
Corp Ten International
D&L Communications
Data Express
DataBurst Technologies
Datron World Communications
Digital Dispatch Systems
Dinet
Diplomat Comm Systems
Eagle Wireless International
Eastcom Industries
ElectroCom Communication Systems
Gamber-Johnson
General Communications
Harris Farinon Div
IDA
IMT ComSys
Itron
King Communications USA
Marketronics
Mentor Engineering
Metroplex Mobile Data
Mobile Data Communications
Modems Plus
Navigation Data Systems
Norand
Onsite Instruments
PacComm Packet Radio Systems
PRC Public Sector
Pyramid Communications
Scientific Dimensions
Sigtec America
Solid-State Electronics
Spillman Data Systems
Synetcom Digital
Talley Communications
Wireless Links
Zebryk Engineering
Zetron
Zirco

Mobile Satellite Equipment

AML Communications
Andrew
Cetacea Sound
CES Wireless Technologies
Comsat RSI/Jefa Wireless

take REMOTE control

1 Base Station

280 The Model 280 has "parallel-status indication" so multiple operators can share the same radio without confusion. Text display, programmable keys, and tone muting make it ideal for any dispatch operation.

Up to 4 Base Stations

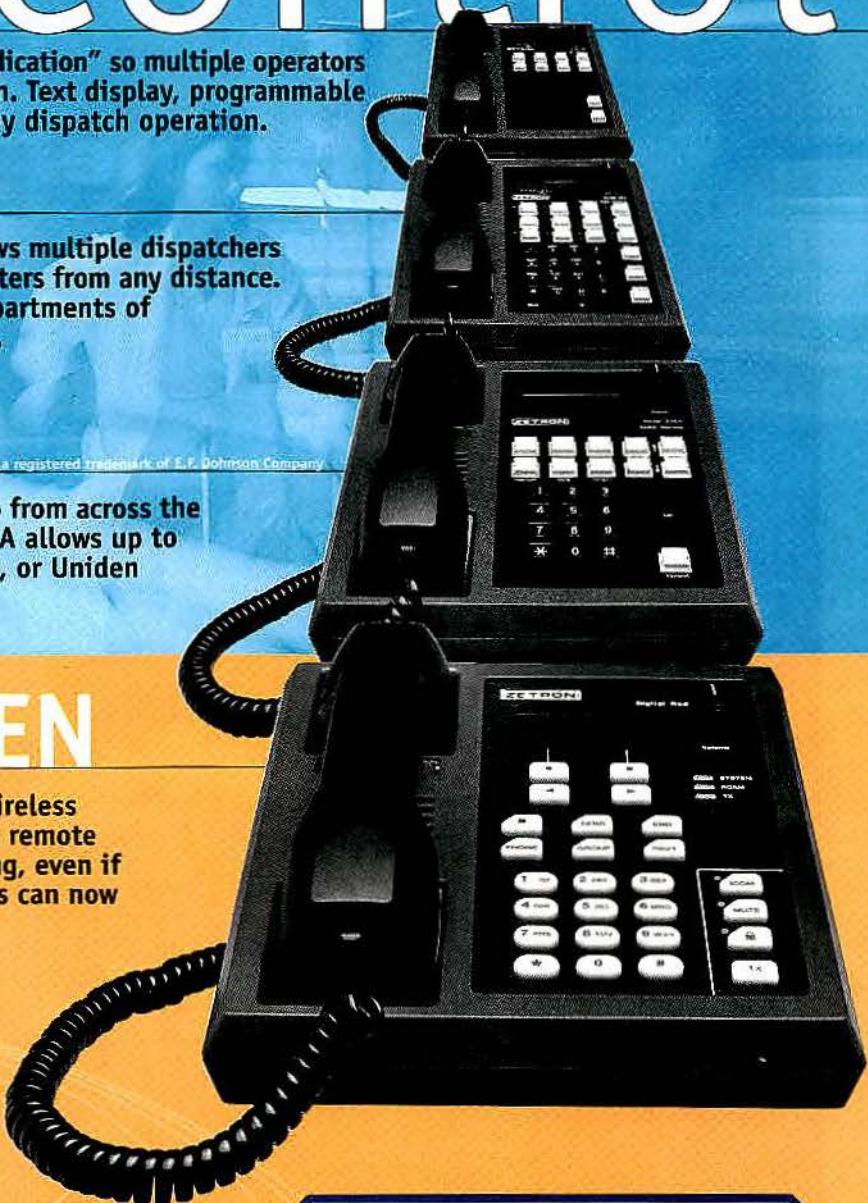
284 The Model 284 with text display allows multiple dispatchers to control up to four base stations or repeaters from any distance. It's become the standard for hospitals, departments of transportation, utilities, and public safety.

LTR® Trunking

230A Now you can control an LTR® radio from across the room or across the country. The Model 230A allows up to 25 people to share a Kenwood, EF Johnson, or Uniden trunking radio.

Motorola iDEN

Z370 The Z370 is designed for digital wireless networks such as Nextel and Cleernet. This remote provides coverage in any room, any building, even if the walls are concrete! Up to 15 employees can now share the same iDEN base station.



Universal
COMMUNICATIONS
in a Wireless
WORLD

Circle (39) on Fast Fact Card

PO Box 97004, Redmond, WA 98073-9704 USA • Phone: 425-820-6363 • Fax: 425-820-7031 • Web: <http://www.zetron.com>

Access Div
Hite Electronic Sales
Hutton Communications
IMT ComSys
Jan Communications &
Electronics
JPS Communications
Kenwood Communications
LeBlanc Communications
Marketronics
Modular Communication
Systems
Optophone Systems
Peninsula Wireless
Communications
Positron
Ranger Communications
Super Wireless Warehouse
Synetcom Digital

Talley Communications
Tatung Telecom
Tekno Industries
Telemobile
TESSCO
Transcrypt International
Transtector Systems
UNIDEN Private Radio
Comm's
Zetron
Modems, RF
ADC Telecommunications
Aerotron-Repc Systems
Alltel Supply
Auto-Comm Engineering
Barnett Engineering
Beam Radio
Berkeley Varitronics Systems

Crescent Radio Electronics
Data Express
DataBurst Technologies
Dynatek Communication Dist
EPCOM
ExCellular Communications
GLB Electronics
Grayhill
Hamtronics
Harris, Farinon Div
IMT ComSys
Jack Daniel
Marconi Instruments
Marketronics
MCM Electronics
Megadata
Metric Systems
Metroplex Mobile Data
Microwave Data Systems

Modems Plus
Monicor Electronics
Morcom International
Moseley Associates
MX-COM
Neulink (Div of RF Industries)
Nutel Electronics
PacComm Packet Radio
Systems
Pacific Crest
PCSI
RF Industries
SFA
SONIK Technologies
Summit Telecommunications
Synetcom Digital
Tactical Electronics
Talley Communications
TelePath
Transcrypt International
VSI Cat Comm International
Wireless Telecom
World Communications Group
Zebryk Engineering

**Modulation
Deviation Meters-
See Service Monitors**

**Mounts and
Mounting Hardware**

ABM Communications
Adams Distributing
American Towers &
Structures
Antenex
AF CommSupply
Antennaco
The Antenna Co
Applied Power
Astron Antenna
Audiovox
Auto-Comm Engineering
Beam Radio
Cartwright Communications
Cellular Solutions
Cellular Wholesalers
Celwave
Cesco
The Clip
Comark Distributing
Cruisers
David Levy
Delcom Industries
Destin Thomas Products
Direct Power & Water
E Tip
Eastcom Industries
Electronic Products
Gamber-Johnson
General Communications
Hartford Concrete Products
Havis Shields Equipment
Hutton Communications
Jackson Telecom
JB Communications
Jon/Beau
Jotto Desk
LeBlanc Communications
Lund Industries
Marketronics
MCM Electronics
Modems Plus
Motorola Aftermarket Products
Mounting Solutions
New-Tronics Antenna
Newmark International
Fred A Nudd
Olympic Radio
Onsite Instruments
ORA Electronics
PanaVise Products
Primus Electronics



CommScope®

Technology Leader

80% WET

100% DRY

CELLREACH®



CommScope®

P.O. Box 1729
Hickory, N.C. 28603
1-800-982-1708
1-888-CELL REACH (235-5732)
Fax: (828) 241-6022

Circle (40) on Fast Fact Card

IFR. The Only Name You Need To Know.



Since 1968,
IFR has proven
itself in the most
demanding testing
environments.

Wireless Test Solutions For Any Application.

Over the years we've learned one important thing about wireless communications: it has to work every time, all the time. That's why when it comes to testing these systems, it makes sense to look to the leader. Whether it's trunking, analog/digital cellular, CDPD or paging applications, IFR is the premier provider of wireless test solutions.

RF Spectrum Analyzers With Performance &

Value. Widely known in the RF testing community for accuracy, dependability and reliability, IFR analyzers set the standard for feature-rich performance and

value. From the ultimate in high performance, to low cost solutions, IFR has an analyzer to fit your needs.

Your Total Testing Source. Making sure wireless systems function properly require solutions that work together. IFR's full line of signal generators, Counter Power Meters, and hand-held power meters are the perfect complement to our radio test sets and spectrum analyzers, and provide the industry's best total testing product line.

To find out more about IFR test solutions, contact your nearest IFR sales office or visit our web site.



For more information call your local IFR office - USA Tel +1 (316) 522-4981 Toll Free 1-800-835-2352 (U.S. Only) Fax +1 (316) 522-1360

Latin America Tel +1 (817) 430-5842 Fax +1 (817) 430-5843 UK Tel +44 1438 742200 Free phone (UK only) 0800 282388 Fax +44 1438 727601

France Tel +33 1 60 79 96 00 Fax +33 1 60 77 69 22 Benelux Tel +31 13 463 95 40 Fax +31 13 463 96 63 Germany Tel +49 81 31 2926-0 Fax +49 81 31 2926-130

Spain Tel +34 1 640 11 34 Fax +34 1 640 06 40 Hong Kong Tel +852 2-832-7988 Fax +852 2-834-5364 Singapore Tel +65 281 8885 Fax +65 281 0113

E-mail: info@ifrsys.com

www.ifrinternational.com

Pro-Fit International
 Pulstar Distributing
 QM Enterprises
 Radio Wholesale
 RSI Wireless Communications
 Scientific Dimensions
 Site Advantage
 SMC Advanced Products
 Stellar Communications
 Talley Communications
 TCC Industries
 TESSCO
 Tower Structures
 Transportation Safety Devices
 Troy Products
 Valmont/Microflect
 The Winsted Corp
 Zero Stantron

Packet Radio Equipment

Anritsu
 B&C Communications
 Beam Radio
 Coded Communications
 Comarco Wireless Technologies
 CES Wireless Technologies
 DataBurst Technologies
 GLB Electronics
 E Gracey Electronics
 GRE America
 Jack Daniel
 LOCSYS
 Metric System
 Metroplex Mobile Data
 Morcom International
 PacComm Packet Radio Systems
 PageTap

Pyramid Communications
 SONIK Technologies
 Syntech Digital
 Talley Communications
 Tekk
 Transcrypt International
 Visiplex
 Wireless Links
 Zebryk Engineering
Pagers
 ACS
 Adams Distributing
 Air Comm
 Auto-Comm Engineering
 B&C Communications
 Beam Radio
 BearCom LP
 Bogen Communications
 Buy-Comm
 Cellular Wholesalers
 Communication Engineers
 CES Wireless Technologies
 C W Wolfe Communications
 Cue Paging
 D&L Communications
 Danmax Communication
 Delcom Industries
 DuraComm
 EPCOM
 Everon America
 ExCellular Communications
 Falcon Direct
 Fourth Dimension Industry
 Gai-Tronics
 General Communications
 Global Wireless Communication Products
 GoComm Wireless (formerly Pagerola)
 Indyme

Inmetco
 Intercontinental Marketing
 Jan Communications & Electronics
 Leavitt Communications
 Lett Electronics
 Linktronic Systems
 M&M Communications
 Marketronics
 Maxon America
 MCM Electronics
 McManus Communications
 Mechem Electronics
 MobileComm
 Morcom International
 Motorola Advanced Messaging Group
 Mountain Communications
 NATCOM (Kern Pager Repair)
 National Pager Services
 NEC America
 Nexacomm International
 Oklahoma Radio Systems
 Olympic Radio
 PageMart Wireless
 PageRepair
 Pana-Pacific
 Panasonic Communications Systems
 The Radio Communications Group
 Radio Wholesale
 Reach Electronics
 Samsung Telecommunications America
 Service Alert
 Shinwa Communications of America
 Smith Communications Service

Socket Communications
 Super Wireless Warehouse
 Technostores (Headquarters)
 TelePath
 TESSCO
 VCP International
 Visiplex
 Vista Communications
 Wetec Electronics
 Wireless Technologies Group
 Wireless Telecom
 Wisco International

Paging Specialties and Accessories

Advance Label & Tag
 AMTELCO
 Anchor Graphics
 Auto-Comm Engineering
 AW Enterprises
 Beam Radio
 BearCom LP
 Bee Electronics
 Bogen Communications
 Canamex Communications
 CES Wireless Technologies
 Compuquest
 Crescent Radio Electronics
 D&L Communications
 Danmax Communication
 DW Electrochemicals
 Eastcom Industries
 EZ Soft Business Software/
 EZ Pager
 Falcon Direct
 Fanon Courier
 Gai-Tronics
 Genave/NRC
 GoComm Wireless (formerly Pagerola)

ALLEN TELECOM
 AN ALLEN INNOVATION

30500 Bruce Industrial Pkwy
 Cleveland, Ohio 44139-3996
 440-349-8400
 FAX: 440-349-8407
800-664-5274
www.allentele.com



© 1998 Antenna Specialists, Inc.

Since the debut of our patented "On-Glass"® and DURA-FLEX® technologies, our full line of fixed station and vehicular products has made **Antenna Specialists** a leader in antenna engineering and development for LMR, Cellular, SMR and PCS applications.

Our legacy continues with the most advanced, cutting edge antenna solutions for emerging markets, including wireless data, mobile satellite, ISM, Wireless Local Loop and GPS technologies.

As always, look to **Antenna Specialists** for the performance of a lifetime.



Circle (42) on Fast Fact Card

output diode voltage limiting current limiting rugged case

low noise light weight

mosfet design low profile

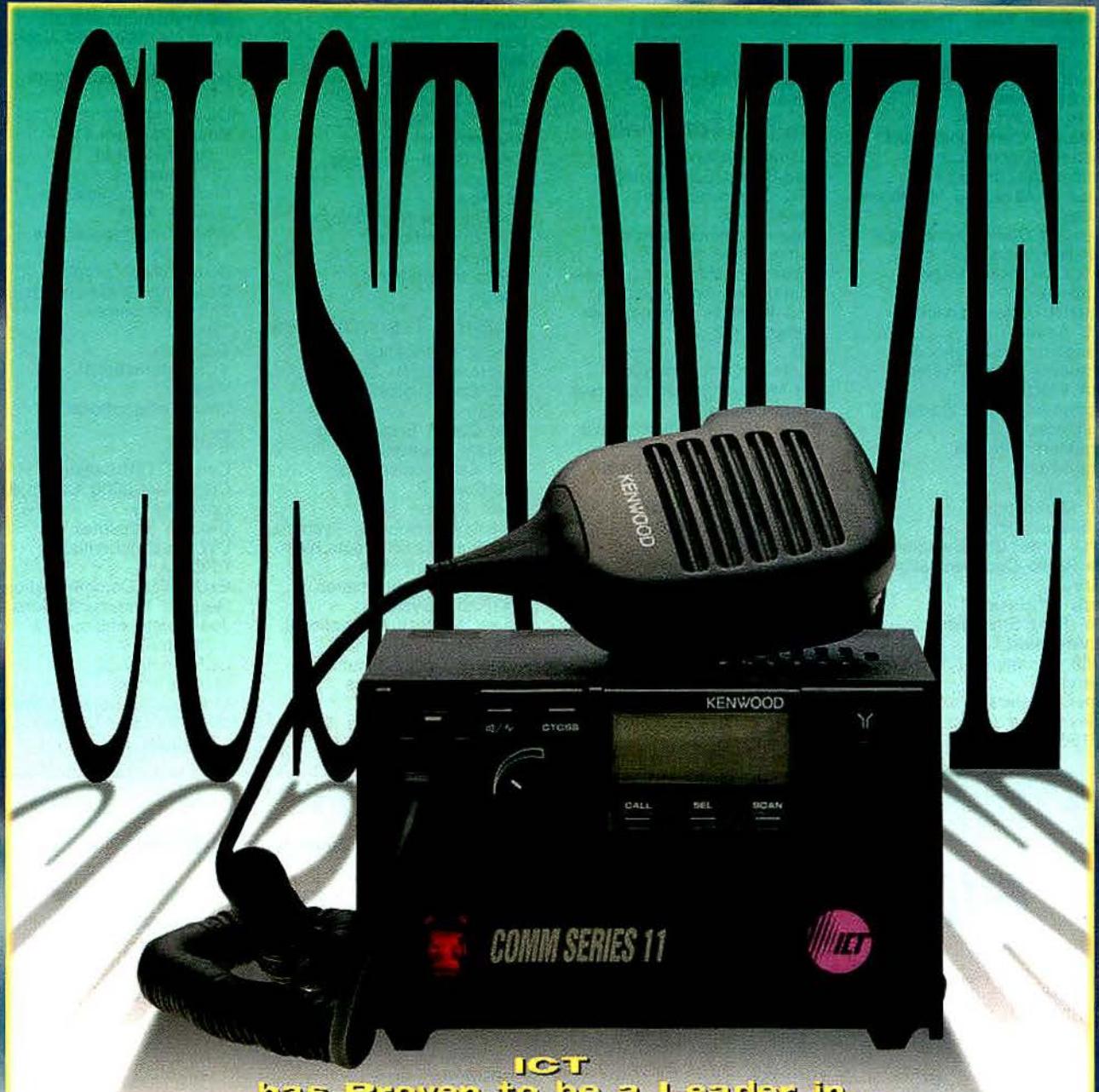
high efficiency

ICT

low noise light weight

under/over voltage protection vibration and moisture resistant

sleek easy to install



ICT

**has Proven to be a Leader in
Switching Technology and Reliability.**

ICT custom designs its Base Station Series wrap around covers to fit selected models of mobile radios, such as E.F.Johnson, Ericsson, GE, Icom, Kenwood, Maxon, Midland, Motorola, Standard, Tait, Uniden and Vertex. The ICT Base Station Series covers are easy to install, sport a clean, sleek, compact design, and complement ICT's 10 Amp through 30 Amp switching power supplies. These power supplies deliver noise free performance, input and output filtering, fuse protection, current limiting, a diode protected output for battery back up and a terminal block connector. Purchase the Complete Base Station (power supply assembled with cover), or the power supply and the cover separately. Get the power of ICT working for you and your customers today.

Customize.



**For great service, contact any of our distributors today.
Visit our web site at: <http://www.ict-power.com> or call: (604)888-6304.**

AF CommSupply Alcan Electronic Dist. Cartel Communication Systems Inc. Electro-Comm Dist., Inc. Hutton Communications Omni Eastcom Group
Omni Provincial Electronics Inc. Primus Electronics Corp. Pulstar Distributing, Inc. Santa Fe Distributing, Inc. Talley Communications Corp. TEDI
TESSCO WR Block & Assoc., Inc.

ICT THE POWER OF RELIABILITY

Circle (43) on Fast Fact Card

Hark Systems
Hutton Communications
Indyme
Information Radio Technology
Inmetco
L-Tronics
Leavitt Communications
Lett Electronics
Linktronic Systems
McManus Communications
Mechem Electronics
Miracom Technologies
Motorola Advanced Messaging Group
Mountain Communications
Multiplier Industries
NATCOM (Kern Pager Repair)
National Pager Services
NEC America
Nexacomm International
Oklahoma Radio Systems
ORA Electronics
PacComm Packet Radio Systems
PageMart Wireless
PageRepair
PageTap
PMI Marketing
Polaris Industries
Quick Draw Clip Systems
The Radio Communications Group
Radio Wholesale
Real Time Strategies
Service Alert
Smith Communications Service
Super Wireless Warehouse
Talley Communications
TESSCO

Transtector Systems
VCP International
Visiplex
Wireless Technologies (Crystronics/Pager)
Wireless Technologies Group
Wireless Telecom
Zetron

Paging Terminals

Adams Distributing
Auto-Comm Engineering
B&C Communications
Beam Radio
Bogen Communications
Commonwealth Communications Industries
Communication Engineers
CES Wireless Technologies
Compuquest
CTI
Danmax Communication
DH Marketing Manufacturers' Representative
Eagle Wireless International
EPCOM
ESA Telecommunications
Escotel Software
Freeman Engineering
Glenayre Electronics
Indyme
Jan Communications & Electronics
Leavitt Communications
Linktronic Systems
Marketronics
Maxon America
Mechem Electronics
Morcom International
Motorola Advanced Messaging Group

Mounting Solutions
NATCOM (Kern Pager Repair)
Olympic Radio
PageMart Wireless
Prism Telecom (TGA Technologies)
Reach Electronics
Real Time Strategies
Service Alert
Smith Communications Service
TekNow
Telelink Communications
VCP International
Visiplex
Wisco International
Zetron

Paging Transmitters

Adams Distributing
Aerotron-Repco Systems
AML Communications
Anritsu
Auto-Comm Engineering
Barnett Electronics
B&C Communications
BearCom LP
Beam Radio
Berkeley Varitronics Systems
Crescent Radio Electronics
Daniels Electronics
Danmax Communication
DX Radio Systems
Eagle Wireless International
EPCOM
General Communications
Glenayre Electronics
Indyme
Jan Communications & Electronics

Leavitt Communications
Marketronics
Mechem Electronics
Morcom International
Motorola Advanced Messaging Group
NATCOM (Kern Pager Repair)
Olympic Radio
Prism Telecom (TGA Technologies)
RF Industries
Scott Communications
Service Alert
Smith Communications Service
SONIK Technologies
Spectrum Communications
Tait Electronics
Tekk
TelePath
VCP International
Visiplex
Wisco International

Parts

Comark Distributing
Comm-Net 2000 Comm & Mfg
David Levy
Delcom Industries
DW Electrochemicals
EPCOM
ExCellular Communications
General Communications
Jan Communications & Electronics
Lett Electronics
Marketronics
Motorola Aftermarket Products
Motorola Land Mobile Products Sector

MDS Point-to-Point Radios for Public Safety Communications

Eliminate leased-line costs and improve reliability!



Voice and Data Radio Communications for:

- Fire, Police and Ambulance Dispatch Links
- Links to Voting Receivers and Mobile Transmitters
- PSAP Communications to Telco Central Office



**CALIFORNIA
MICROWAVE**

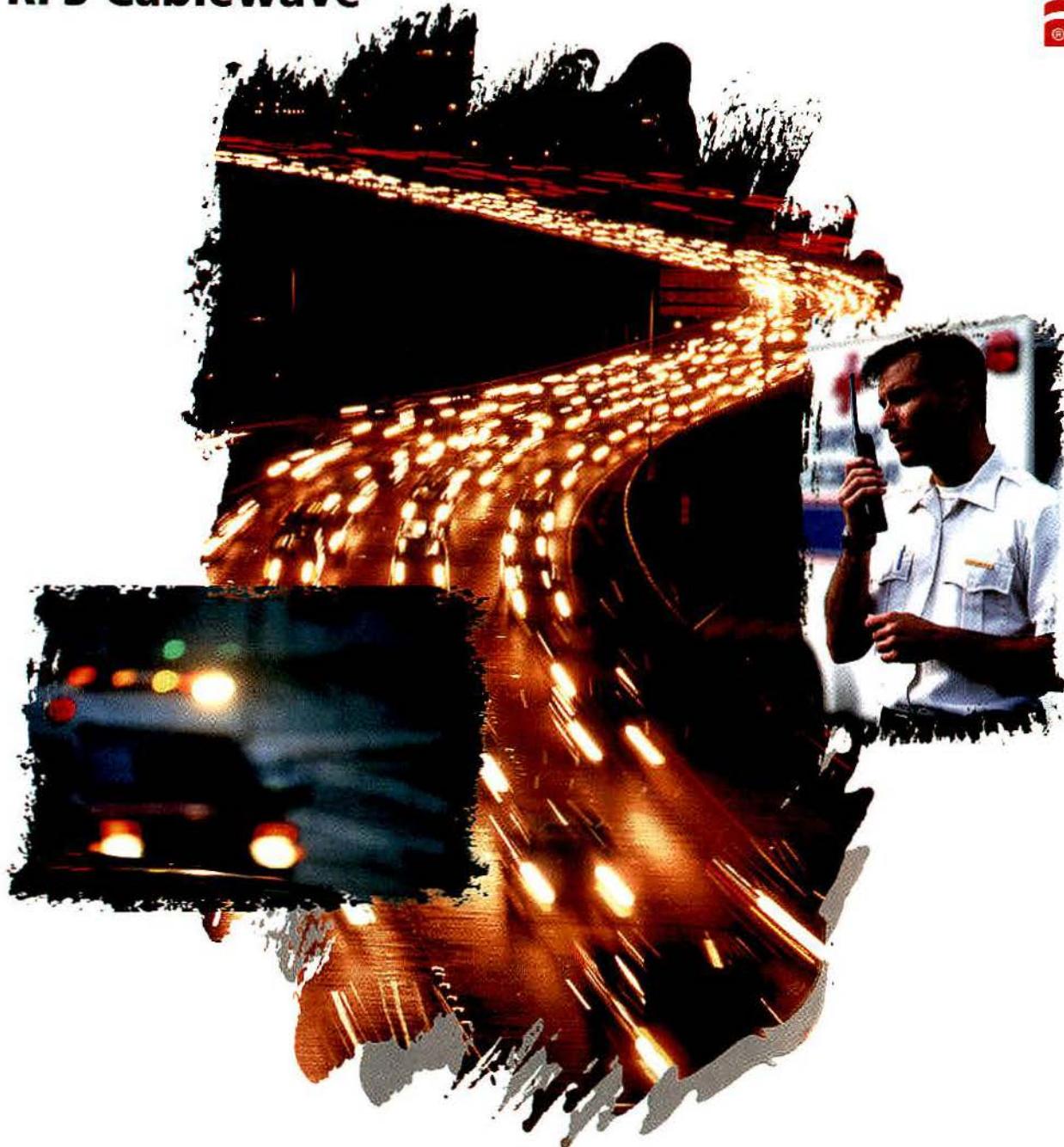
**MICROWAVE
DATA
SYSTEMS**

Microwave Data Systems • 175 Science Parkway
Rochester, New York 14620 U.S.A.
Phone: (716) 242-9600 FAX: (716) 242-9620
Website: www.microwavedata.com



RADIO FREQUENCY SYSTEMS

RFS Cablewave



FLEXWELL® Low Loss Foam Coaxial Cables Premium Connectors and Accessories

For Critical Public Safety Communications

RFS Cablewave Systems
Division of Radio Frequency Systems, Inc.
200 Pondview Drive
Meriden, CT 06450

Tel: (203) 630-3311
Fax: (203) 821-3852
www.cablewave.com

Mountain Communications
NEC America
Palstar Bramco
Radio Wholesale
Site Advantage
Super Wireless Warehouse
Transcypt International
Transportation Safety Devices
VCP International
Wetec Electronics

Power Supplies

Accele Electronics
Acopian Technical Company
Adams Distributing
Advanced Receiver Research
AdvanceTec Industries
AF CommSupply
Applied Power
Argus Technologies
Astron
Auto-Comm Engineering
B&K Precision/MAXTEC
Battery Network
Benelec
Best Power (a unit of General Signal)
Cal-Scope
Cartwright Communications
Cellular Solutions
Comark Distributing
Comsat RSI/Jefa Wireless Services
Contact East
CSI/Speco
CSS Power
David Levy
Delcom Industries
Diplomat Comm Systems
DuraComm
Eastcom Industries
Electro-Comm Dist

Electronic Products
Elenco Electronics
EPCOM
Fluke
Generac
GLB Electronics
Harris RF Communications Div
Hawker Energy Products
Helper Instruments
Hendry Telephone Products
Hewlett-Packard
Hite Electronic Sales
HMC-Hub Material



Hutton Communications
ICT
Imark Communications Pty
Inwave
Jan Communications & Electronics
LaMarche Mfg
Lett Electronics
Liebert
Marketronics
MCM Electronics
Meirick
Motorola Aftermarket Products
NATCOM (Kern Pager Repair)
Newmar
Olympic Radio
Peninsula Wireless Communications
Power Conversion Products
Primus Electronics
Pulstar Distributing

QM Enterprises
Radio Wholesale
Samlex America
Secom Systems
Sharp Communication
Sinclair Technologies
Spectrum Communications
Sunelco
Talley Communications
TCC Industries
TESSCO
Transportation Safety Devices
Tripp Lite
ValueTronics International
VoCom Products
Warner Electric (Bristol Plant)
Webster Communications
Wilmore Electronics
Wisco International
C W Wolfe Communications
Zirco

Preselectors—See Antenna Site Equipment

Programmers, NAM, PROM and Others

B&K Precision/MAXTEC
BYTEK
Cartwright Communications
Cetacea Sound
Curtis Electro Devices
EPCOM
ExCellular Communications
HMC-Hub Material
Mechem Electronics
NATCOM (Kern Pager Repair)
Nexacom International
Polaris Industries

The Radio Communications Group
Roadrunner Communications
VCP International

Racks, Equipment

Adams Distributing
ADC Telecommunications
Alltel Supply
Atlas/Soundolier
Auto-Comm Engineering
Berkeley Varitronics Systems
Cartwright Communications
Cellular Solutions
Celwave
Cruisers
Decibel Products (Allen Telecom)
Direct Power & Water
FWT
General Communications
Haewa Communications
Harris Farinon Div
Hartford Concrete Products
Hendry Telephone Products
Hutton Communications
Imark Communications Pty
Jackson Telecom
Jan Communications & Electronics
Jon/Beau
Kintronic Labs
Liebert
Marketronics
MCM Electronics
Middle Atlantic Products
Mounting Solutions
Newmar
Olympic Radio
Primus Electronics
Rittal
Secom Systems

Six great reasons to find out about the Cadex C7000 now:

Prolong battery life by one year

Improve battery reliability 100%

Service all battery types



Service thousands of battery models

Sort batteries with 5 second OhmTest

Print service labels for simple fleet management



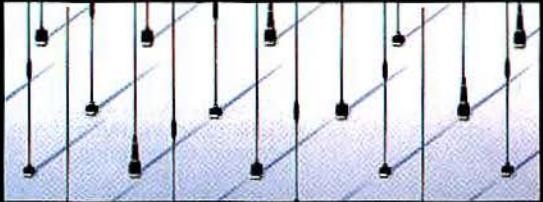
Contact Us Today!

Toll Free: 1-800-565-5228

Internet: www.cadex.com

Email: analyzers@cadex.com

Fax: +1 604-451-7991



ROCKIN' CLASSIC

ROLLIN' CLASSIC

RADIO CLASSIC

20 YEARS LATER, OUR CLASSICS ARE BETTER THAN EVER.

Is it possible to improve on a classic? At MAXRAD, we believe it is. Sure, the '64 Corvette is one-in-a-million. And the old Les Paul guitars are valuable collectibles. But over the years both have been improved through innovation and technology. At MAXRAD we have used the same philosophy to improve our classic mobile antennas.

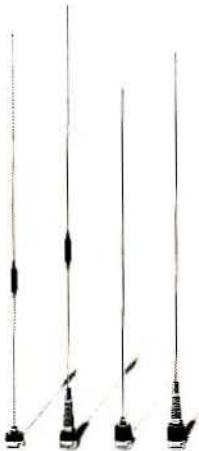
Since 1978, we have made countless improvements to our mobile antennas so they perform better, longer and for a wider range of radio products. Since 1978, we have become the premier supplier of mobile antenna products. We couldn't have done this without the support of our loyal dealers—folks who know classic value and quality.

And we're not stopping there. At MAXRAD we're constantly developing new products that will, one day, become classics.

► MAXRAD'S CLASSIC ANTENNAS

Our classic mobile antennas have been working hard for our customers for 20 years. And every day, we're working to improve these classics and develop new ones. Join the leader whose "new classics" are ready to meet the specifications of tomorrow's radio products.

- Low Band
- VHF
- UHF
- 800 MHz



Contact us about our complete new line of 2.4 GHz ISM wireless data antennas.

MAXRAD
STATE OF THE ART ANTENNAS

CALL: (800) 323-9122

www.maxrad.com



Skaggs Telecommunications
Service
Talley Communications
Telewave
Troy Products
The Winsted Corp
Zero Stantron

**Radios—See Repeaters,
Transceivers**

**Recorder—See Logging
Recorders**

Recorders

AAT Communications
Systems
Algo Data Systems

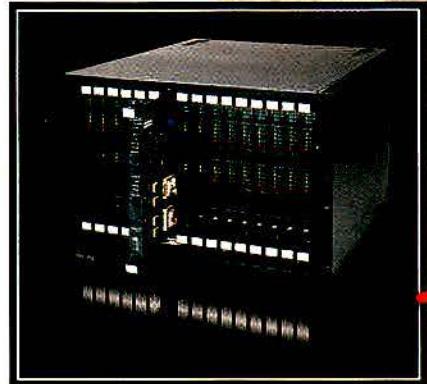
Compuquest
Converse Information
Systems
Dictaphone
Digital Recorders
Eventide
General Communications
JEI Communications
Recording System
Manon Engineering
Omnicron Electronics
Racial Recorders
Richardson Electronics
Seltronics Eyretel
Spilsbury Communications Div
of Racial Canada
Syntelcom Digital
TEAC America
Tekno Industries
Zetron

**Remote Control,
Tone, DC and
Others**

Adams Distributing
AIMS Technologies
Air Comm
Alligator Communications
Auto-Comm Engineering
Automation & Electronics
Engineering
B&C Communications
Beam Radio
Berkeley Varitronics Systems
Capital Area Communications
Cartwright Communications
Comark Distributing
Commtronics Engineering
Communications & Signals

CES Wireless Technologies
Compuquest
CPI Communications
Crescent Radio Electronics
CTI
CTI Products
C W Wolfe Communications
Danmax Communication
DataCom Systems
Dataprobe
Datron World Communications
Davicom Technologies
Diplomat Comm Systems
Eagle Wireless International
Eastcom Industries
Electro-Comm Dist
Electronic Products
Gai-Tronics
Genave/NRC
General Communications
Gronel Assoc
Hamtronics
Hutton Communications
IDA
Jan Communications &
Electronics
JPS Communications
Linktronic Systems
Manon Engineering
Marketronics
MCM Electronics
Midian Electronics
Monroe Electronics
Moseley Associates
Nida
NorComm
Olympic Radio
PageTap
Palstar Bramco
Parkinson Electronics
Primus Electronics
Pulstar Distributing
Radio Wholesale
RadioMate
Rayfield Communications
Sabre Communications
S-Com Industries
Smith Communications
Service
Solid-State Communications
Solid-State Electronics
Spectrum Communications
Talley Communications
TelePath
Telewave
TESSCO
Vega
World Communications
Group
Zetron

The Protocol is
PASSPORT®



The System is
NTS®

**Together,
they are
the world's
most powerful
SMR network solution.**

NTS (Networked Trunked System) from Trident Micro Systems

is a build-as-you-go network infrastructure. The digital distributed network architecture provides maximum user capacity.

NTS provides a ready migration path to digital.

Features:

- 60,000 ID Codes Per System
- Automatic Roaming and Check-in
- Wide Area Dispatch Operation
- Unique ESN Per Radio
- 128 Sites Per Network
- Selective Calling Within a System
- HOT Swapable Plug-in Cards
- Exclusive CyberTune System Set-up
- Up to 256 Ports Per Site
- Primary and Secondary Fail-safe Systems

TRIDENT
MICRO SYSTEMS

Two Trident Drive, Arden, North Carolina, 28704
Phone (828) 684-7474 • (800) 798-7881 • Fax (828) 684-7874
www.tridentms.com • sales@tridentms.com

Circle (53) on Fast Fact Card

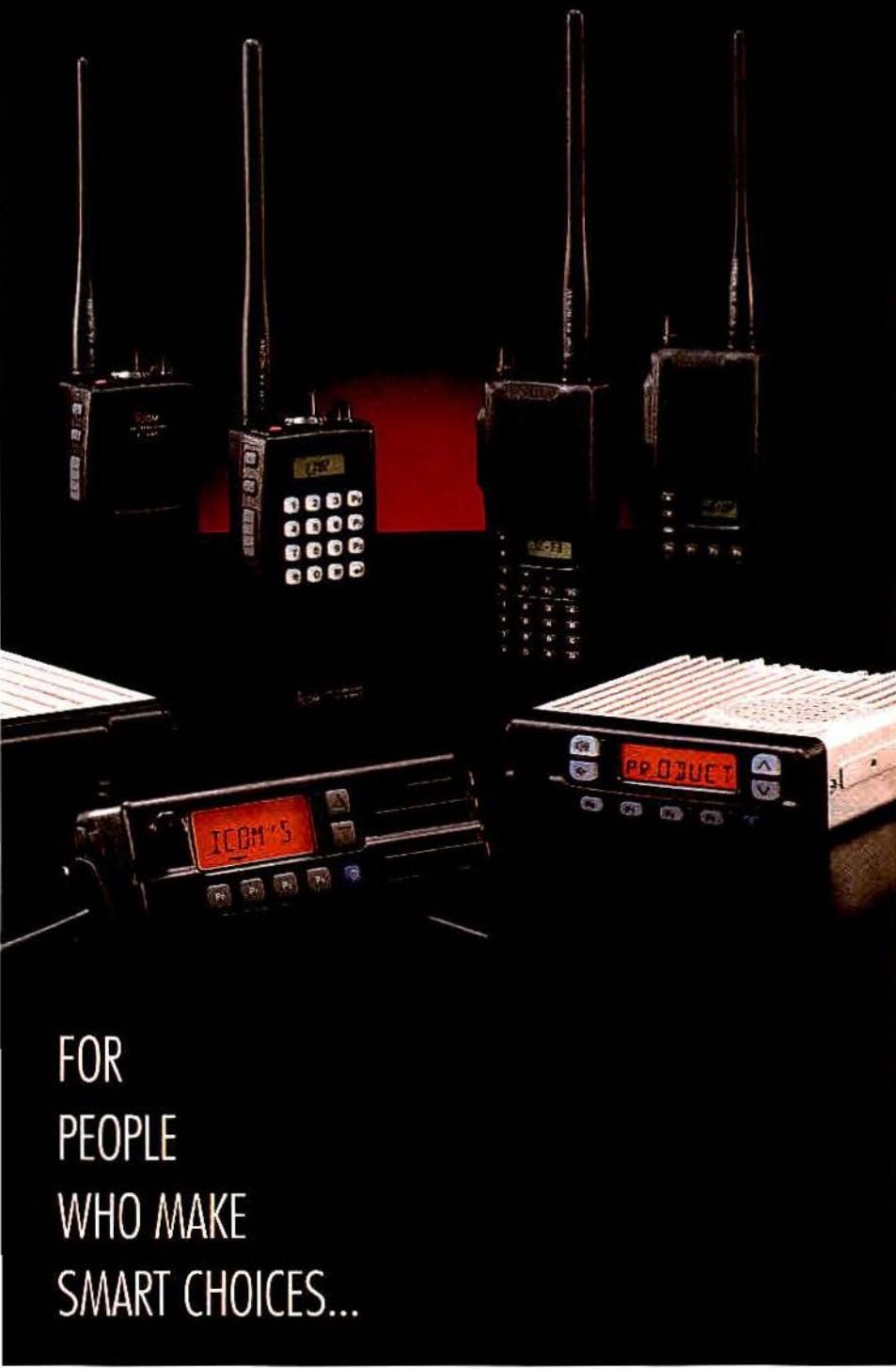
**Repeater Control
Equipment**

Adams Distributing
Auto-Comm Engineering
B&C Communications
Beam Radio
Cartwright Communications
Comm-Net 2000 Comm & Mfg
Communication Engineers
CES Wireless Technologies

**COMMUNICATIONS
SPECIALISTS, INC.**

Communications Specialists
Compuquest
Connect Systems
Creative Control Products
Crescent Radio Electronics
CTI Products
D&R Associates
Danmax Communication
Davicom Technologies
Delcom Industries

[Mil Spec Tough]



FOR
PEOPLE
WHO MAKE
SMART CHOICES...

Take A Look At **ICOM**

If you're looking for a radio communications company that offers:

- A Full Line of Products for all Applications
- State of the Art Technology
- High Performance
- Rugged Reliability
- Great Value
- Exceptional Personal Service

We may be the radio company for you.

For free literature call us at 425-450-6088.



ICOM
www.icomamerica.com

©1998 ICOM America, Inc. 2380 116th Ave. NE, Bellevue, WA 98004 • 425-454-8155 • The Icom logo is a registered trademark of ICOM, Inc. LMFAMILYRR1098Y

Circle (31) on Fast Fact Card

Diplomat Comm Systems
 Eagle Wireless International
 Eastcom Industries
 EPCOM
 Ericsson
 Gai-Tronics
 General Communications
 Global Wireless
 Communication Products
 Doug Hall Electronics
 Hamtronics
 IDA
 Jan Communications & Electronics
 JPS Communications
 King Communications USA

 Link Communications
 Manon Engineering
 Marketronics
 Motorola Aftermarket Products
 Nida
 Olympic Radio
 Pacific Circuit Design
 Parkinson Electronics
 PCI-Pekaar Communication
 Pyramid Communications
 Radio Wholesale
 Rayfield Communications
 S-Com Industries
 Secom Systems
 Solid-State Communications
 Spectrum Communications
 Talley Communications
 Telemobile
 TESSCO
 Transcrypt International
 UNIDEN Private Radio

Comm's
 Wisco International
 C W Wolfe Communications
 World Technical Services
 Zetron

Repeaters

O Repeaters
 B Base
 C Crossband
 M Mobile
 P Portable
 Adams Distributing BCMP
 Air Comm BMP
 Allen Telecom BMCP
 AML Communications B
 Andrew PMBC
 AF CommSupply C
 Antenna Specialists (Allen Telecom) BM
 Auto-Comm Engineering BCMP
 Barnett Electronics BM
 B&C Communications BCMP
 Beam Radio BCMP
 BK Radio BCMP
 California Radio BCMP
 Cellular Solutions P
 Celwave B
 Comm-Net 2000 Comm & Mfg CMBP
 Communication Engineers BCMP
 Communications & Signals BCMP
 C W Wolfe Communications BCMP
 D&L Communications MPB
 D&R Associates BCMP

Daniels Electronics BCP
 Danmax Communication BCMP
 Dataradio MPBC
 Delcom Industries MPBC
 Diplomat Comm Systems MCBP
 DX Radio Systems BC
 Eagle Wireless International BCMP
 Earmark BCP
 EPCOM BMP
 Ericsson BMP
 Falcon Direct BCMP

 Futurecom Systems Group BCM
 General Communications BCMP
 Global Wireless Communication Products BCMP
 Haewa Communications BCMP
 Hamtronics BC
 Hite Electronic Sales BCMP
 Icom America BCMP
 IDA CBMP
 Imark Communications Pty BCMP
 Inmetco MP
 Jan Communications & Electronics BCMP
 JPS Communications BCMP
 Kenwood Communications BCMP
 Kenwood Systems Group
 King Communications USA BC

Lett Electronics MPCB
 LGP B
 M&M Communications B
 Manon Engineering BCMP
 Marketronics BCMP
 Mechem Electronics BCMP
 Monicor Electronics BP
 Morcom International BCMP
 Mountain Communications BCMP
 NEC America MP
 Neulink (Div of RF Industries) BCMP
 Nida BCMP
 NSI Communication BPMC
 Olympic Radio BCMP
 Ortel BCMP
 BearCom LP B
 PCI-Pekaar Communication BP
 Piiceon M
 Powerwave Technologies BC
 Premier Communications P
 Pyramid Communications CMPPB
 Radio Systems CMPPB
 Radio Wholesale MPB
 RELM Communications BCMP
 Repeater Technologies B
 RF Technology BCP
 Ritron BMP
 SEA B
 Secom Systems BCMP
 Sentry Services International BM
 Shinwa Communications of America P
 Skyline Radio MP
 Smith Communications Service B

ALL THE COMMUNICATION EQUIPMENT YOU NEED... IN ONE CATALOG!

For over 20 years, Marketronics has provided quality communication equipment at very competitive prices.

Now, we bring you our **NEW Product Selection Guide**. It's packed with cutting edge products from many new manufacturers as well as expanded offerings of existing product lines.

When you select Marketronics as your provider, you'll receive quality equipment along with excellent service at the lowest total cost.

Contact us today to request your **FREE** copy of our catalog!

- More than 10,000 items
- Over 120 Manufacturers
- Lowest Total Cost

- tel: 800 845 1230 or 954 846 1011
- fax: 954 846 1672
- email: sales@marketronics.com
- www.marketronics.com



320 International Parkway • Sunrise, FL 33325

World's Leading Distributor of Quality Wireless Equipment

Circle (32) on Fast Fact Card



Introducing Decibel's Omni Diversity Master™ – the first omni antenna with dual polarization.

There's no doubt what reaction you'll get with the better signal strength and improved uplink performance of Decibel's new Omni Diversity Master. With the enhanced diversity of dual polarization combined with 360 degree signal penetration, it's only natural to smile. Available in the 896-942 MHz frequency for paging and trunking, the Omni Diversity Master handles 500 watts of power, delivers a gain of 9 dBi (11.1 dBi), and provides an isolation greater than 30 dB. And it meets or exceeds the same quality standards you've come to expect from us. So proceed with caution; this antenna may spark a smile.

To learn more about the Omni Diversity Master and to order a free catalog, call 1-800-676-5342 or 214-631-0310, or visit www.decibelproducts.com to see our antenna patterns online.

PO Box 569610
Dallas, Texas 75356 9610
Order FAX 1-800-229-4706
FAX 214-631-4706
ALLEN TELECOM
DECIBEL PRODUCTS



The Decibel Products Division is compliant with all ISO 9001 standards

Check out our antenna patterns at www.decibelproducts.com

Deal with Decibel and be happy.™

Spectrum Communications BCP
 Spilsbury Communications Div of Racal Canada BMP
 Standard Communications
 Land Mobile Div BM
 Super Wireless
 Warehouse MP
 SWS Security CMP
 Tait Electronics BCMP
 Telemobile BCMP
 TelePath BCMP
 Transcript International BCMP
 Vertex Radio Communications BMP
 Wisco International BMP

**RF Filters—See
 Antenna Site Equipment**

**Rural Radio
 Telephone Systems**

Carlson Communications
 Celwave
 CES Wireless Technologies
 CTI
 Daniels Electronics
 DataCom Systems
 DX Radio Systems
 EPCOM
 GLB Electronics
 GRE America
 Hark Systems
 Harris Canada Wireless Access Div
 Jan Communications & Electronics
 JPS Communications

Kyodo West
 Manon Engineering
 Marketronics
 Midian Electronics
 Olympic Radio
 Optaphone Systems
 Pacific Circuit Design
 Professional Technology Systems PT Systems
 Ritron
 SmartLink Development
 Spilsbury Communications Div of Racal Canada

TELEMOBILE Wireless Communication Systems
 Telemobile
 Telepoint
 3dbm
 Wisco International
 Zetron

RF Links

Adams Distributing
 ADC Telecommunications
 Aerotron-Repro Systems
 Alligator Communications
 Andrew
 Auto-Comm Engineering
 B&C Communications
 Beam Radio
 Berkeley Varitronics Systems
 Carlson Communications
 Catcom Systems
 Coded Communications
 Comm-Net 2000 Comm & Mfg
 Communications & Signals
 CP Communications
 D&R Associates
 Daniels Electronics
 DataCom Systems

DX Radio Systems
 EPCOM
 GLB Electronics
 GRE America
 Hark Systems
 Harris Canada Wireless Access Div
 Jan Communications & Electronics
 JPS Communications

Manon Engineering
 Marketronics
 Metric Systems
 Metroplex Mobile Data
 Microwave Data Systems
 Monicor Electronics
 Moseley Associates
 Neulink (Div of RF Industries)
 Norand
 Nutel Electronics
 Olympic Radio
 Optaphone Systems
 PacComm Packet Radio Systems
 Pacific Circuit Design
 Peninsula Wireless Communications
 Pyramid Communications
 Radio Systems
 Rayfield Communications

DX Radio Systems
 Eagle Wireless International
 Electronic Products
 EPCOM
 Ericsson
 Flexco Microwave
 Gabriel Electronics
 GLB Electronics
 GRE America
 Hamtronics
 Harris RF Communications Div
 Hite Electronic Sales
 IDA
 Imark Communications Pty
 Jack Daniel
 Jan Communications & Electronics
 KAVIcomm
 Linktronic Systems
 Lockheed Martin Microwave-Narda

Manon Engineering
 Marketronics
 Metric Systems
 Metroplex Mobile Data
 Microwave Data Systems
 Monicor Electronics
 Moseley Associates
 Neulink (Div of RF Industries)
 Norand
 Nutel Electronics
 Olympic Radio
 Optaphone Systems
 PacComm Packet Radio Systems
 Pacific Circuit Design
 Peninsula Wireless Communications
 Pyramid Communications
 Radio Systems
 Rayfield Communications

RF Technology
 Ritron
 SmartLink Development
 Solid-State Electronics
 SONIK Technologies
 Spectrum Communications
 Synetcom Digital
 Tactical Electronics
 Talley Communications
 Telemobile
 TelePath
 Torfino Enterprises
 Western Multiplex
 Wisco International
 World Communications Group
 Zebryk Engineering

**Scanning Receivers
 (Scanners)**

Ace Communications Monitor Div
 Adams Distributing
 Beam Radio
 Berkeley Varitronics Systems
 Commtronics Engineering
 Global Wireless Communication Products
 Grayson Wireless
 Jan Communications & Electronics
 MCM Electronics
 Mountain Communications
 Norand
 NSI Communication
 Optoelectronics
 Prism Telecom (TGA Technologies)
 Pulstar Distributing
 RELM Communications
 Rohde & Schwarz
 Stuart Electronics
 Synetcom Digital
 Talley Communications
 Thunder Eagle

**Scramblers,
 Encryption Devices**

Adams Distributing
 AF CommSupply
 Auto-Comm Engineering
 B&C Communications
 Berkeley Varitronics Systems
 Cartwright Communications
 Cellular Solutions
 Comm-Tech International
 Communication Engineers
 Communications & Signals
 Cromack Industries
 Cycomm
 Danmax Communication
 Eastcom Industries
 EPCOM
 Ericsson
 Falcon Direct
 Global Wireless Communication Products
 Harris RF Communications Div
 Hutton Communications
 IDA
 Imark Communications Pty
 Jan Communications & Electronics
 King Communications USA
 Marketronics
 Mechem Electronics
 Midian Electronics
 Morcom International
 MX-COM
 NorComm
 Pacific Circuit Design
 Pulstar Distributing
 Selectone
 Smith Communications Service

Introducing the new...

MONGOOSE

HAND HELD RECEIVER

The Mongoose is a light weight receiver that's ideal for quick indoor sweeps by propagators.

- Internal memory stores signal strength that can be output to a PC with a serial cable
- Large graphic EL backlit display allows user to view any 3 channels simultaneously
- Rechargeable Ni-Cad Battery
- Audio can be heard through headphone jack or an internal speaker
- Available in most popular frequency formats
- Weights under 5 lbs. (Including battery)



When you need more than the Champ Ultra-Lite and not as much as a Champ, you need the Mongoose.

The Mongoose is just one of many exceptional design solutions from Berkeley Varitronics.

Call us today for more information:

(732) 548-3737 / Fax: (732) 548-3404

Internet: <http://www.bvsystems.com>

E-mail: info@bvsystems.com

**BERKELEY
 VARITRONICS
 SYSTEMS**

Circle (90) on Fast Fact Card

When the Mother of All Storms Strikes,



Zetron paging system owners can rest easy.

They're guarded by our versatile system and 24-hour emergency support staff. At the first hint of a power loss the system can call operations personnel wherever they are. If there's a primary failure, the system can automatically switch to a backup Zetron paging terminal. It can easily be programmed to call and tell you "all's well." Anytime. Anywhere.

Zetron paging systems also set the industry standard for reliable service. They just keep on quietly doing their job in the equipment room. Maybe it's time for you to rest easy too.

Call the Zetron paging team today!



Model 2200

Zetron, Inc. PO Box 97004, Redmond WA 98073-9704 USA

Ph: (425) 820-6363 Fax: (425) 820-7031 Email: zetron@zetron.com Web: <http://www.zetron.com>
European Office: Zetron, Inc. 27-29 Campbell Court, Bramley, TADLEY, Basingstoke, RG26 5EG, UK Phone: +44 1256 880663 Fax: +44 1256 880491

ZETRON®

Solid-State Communications
Synetcom Digital
Talley Communications
TESSCO
Transcrypt International
Wisco International

Selective Calling-

See Signaling

Semiconductor Testers

Cetacea Sound
David Levy
Elenco Electronics
HMC-Hub Material Company
Jan Communications & Electronics

Service Manuals

Air Comm
Artech House
Cartwright Communications
Commtronics Engineering
Curtis Electro Devices
C W Wolfe Communications
David Levy
Delcom Industries
EPCOM
Global Wireless
Communication Products
Index Publishing Group
MCM Electronics
PACE
Radio Wholesale
Ramsey Electronics

Service Monitors and Modulation Deviation Meters

AEA Div of Tempo Research
Alcom Electronics
AF CommSupply
Auto-Comm Engineering
Barnett Electronics
Berkeley Varitronics Systems
Cartwright Communications
Communication Instruments
Compuquest
DH Marketing Manufacturers' Representative
Electronic Products
Helper Instruments
Hewlett-Packard
Hutton Communications
IFR Systems
Marconi Instruments
Marketronics
Motorola Aftermarket Products
Noise Com/
Wireless Telecom Group
NS Electronics Service
Primus Electronics
Ramsey Electronics
RF Imaging &
Communications
Rohde & Schwarz
SAFCO Technologies
Simulcast Solutions
A W Sperry Instruments
Talley Communications
Tekno Industries
TelePath
TESSCO
ValueTronics International
Wayne Kerr/Farnell
Wisco International
Z-Technology

Shelters

Alltel Supply

American Towers & Structures
Andrew
AF CommSupply
Applied Power
Auto-Comm Engineering
Bally Engineered Structures
Broadcast Buildings
Cellxion
Comsat RSI/Jefa Wireless Services
DH Marketing Manufacturers' Representative
DuPont Building
Easi-Set Industries
Electronic Products
Enviro-Buildings
Fibrebond Resources
FWT
HaddCOMM International
Hartford Concrete Products
Hill Radio Communications
Hite Electronic Sales
Hulse Enterprises
Illumicell
Landmark Tower
Miller Telecom Services
Mobile International
Mod-Tek
Olympic Radio
Primus Electronics
Professional Systems
Ramsey Electronics
ROHN Industries
Ruf*Nek Building Systems
Sinclair Technologies
Switzer Products
Telco Services
Tower Structures
TWR Telecom
Utility Structures

Shielded Enclosures and Accessories

AF CommSupply
Auto-Comm Engineering
Berkeley Varitronics Systems
Broadcast Buildings
FWT
Haewa Communications
Hartford Concrete Products
Hendry Telephone Products
Lindgren RF Enclosures
Pacific West Electronics
Primus Electronics
Ramsey Electronics
Rittal
Spectrum Communications
Telco Services
Utility Structures

**Signaling, Control
Equipment, Analog
(CTCSS, DTMF, Two-Tone
and Five-Tone Encoders-
Decoders)**

Adams Distributing
Air Comm
Alcom Electronics
Alligator Communications
AF CommSupply
Auto-Comm Engineering
Automation & Electronics
Engineering
B&C Communications
Berkeley Varitronics Systems
Berry Controls
BK Radio
Cartwright Communications
Communication Engineers
Communications & Signals
CES Wireless Technologies

COMMUNICATIONS SPECIALISTS, INC.

Communications Specialists
Compuquest
Connect Systems
Conway Engineering
Creative Control Products
Cromack Industries
CyberSym Control Systems
D&L Communications
Data Signal
Dataprobe
Davicom Technologies
Delcom Industries
Diplomat Comm Systems
Eagle Wireless International
Eastcom Industries
Electro-Comm Dist
Electronic Products
EPCOM
Gai-Tronics
GoComm Wireless (formerly
Pagerola)
Gronel Assoc
Hamtronics
Hite Electronic Sales
Hutton Communications
IDA
Jan Communications &
Electronics
Lucent Technologies
Manon Engineering
Marketronics
Mechem Electronics
Midian Electronics
Monroe Electronics
MX-COM
NorComm
NS Electronics Service
Optoelectronics
PageTap
Palstar Bramco
Penta
Pipo Communications
Primus Electronics
Prism Telecom Div TGA
Technologies
Pulstar Distributing
Reach Electronics
RELM Communications
RF Industries
S-Com Industries
Secom Systems
Selectone
SmartLink Development L P
Solid-State Communications
Spectrum Communications
Speedcall
Synetcom Digital
Talley Communications
TESSCO
TLP Technologies
Transcrypt International
Vega
Wisco International
Zetron

Signaling, Control Equipment, Digital

AEA Div of Tempo Research
Alligator Communications
B&C Communications
Berkeley Varitronics Systems
Cartwright Communications
Communications & Signals
CES Wireless Technologies

COMMUNICATIONS SPECIALISTS, INC.

Communications Specialists
Compuquest
Conway Engineering

Cromack Industries
CTI Products
C W Wolfe Communications
D&L Communications
Dataprobe
Diplomat Comm Systems
Eastcom Industries
Ericsson
Gai-Tronics
GRE America
Gronel Assoc
Hutton Communications
King Communications USA
Lucent Technologies
Manon Engineering
Marketronics
Mechem Electronics
MX-COM
NorComm
Prism Telecom (TGA
Technologies)
Pulstar Distributing
Pyramid Communications
RF Industries
S-Com Industries
Simulcast Solutions
SmartLink Development L P
Solid-State Electronics
Speedcall
Synetcom Digital
TLP Technologies
Transcrypt International
Wisco International
Zebryk Engineering
Zetron

Simulcast Systems

Adcomm Engineering
Beam Radio
Berkeley Varitronics Systems
Comsat RSI/Jefa Wireless
Services
DX Radio Systems
Eagle Wireless International
Ericsson
Marketronics
Olympic Radio
Peninsula Wireless
Communications
RF Technology

Simulcast SOLUTIONS

Simulcast Solutions
Spectracom
Spectrum Communications
Transcrypt International
Zetron

SINAD Meters

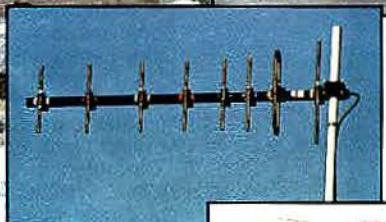
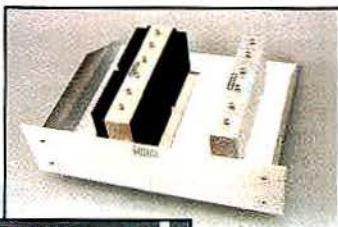
AEA Div of Tempo Research
Alcom Electronics
AF CommSupply
Berkeley Varitronics Systems
Cartwright Communications
DH Marketing Manufacturers'
Representative
Helper Instruments
Hutton Communications
Manon Engineering
Marconi Instruments
Marketronics
Motorola Aftermarket Products
Ramsey Electronics
Simulcast Solutions
Talley Communications
TESSCO
TLP Technologies
Transcrypt International
Vega
Wisco International
Zetron

Software, Business

Andrew

"COMING THROUGH LOUD AND CLEAR"

- Wattmeters
- Combiners
- Duplexers
- Antennas
- Filters
- System Integration



Telewave, Inc. delivers high performance everytime, everywhere.

We bring 26 years of product and system design experience to the table for every customer, large or small, worldwide.

With a full line of standard products, and custom designs available for special projects, our support of Public Safety, Government, and Business systems is second to none.

Contact Telewave today at **1-800-331-3396** and discuss your system requirements with our sales engineers. Or visit our website at www.telewave.com

Telewave, Inc.
1155 Terra Bella Avenue
Mountain View, CA 94043
email: sales@telewave.com

 **TELEWAVE, INC.** 
Wireless Communications Manufacturers Since 1972

Berkeley Varitronics Systems
BIA Research
CNET Subsidiary of Glenayre
CyberSym Control Systems
DataBurst Technologies
Delcom Industries
The Genesis Group
John Mitchell
Juno Online Services LP
Lynn-Arthur Assoc
On Target Mapping
Open Development
Public Safety Systems (PSSI)
RaCoTek
Sage Data Systems Div
America West C&E
ServiceWare
Slattery Software
Subscriber Computing
Tandem Computers
Technostores (Headquarters)
TLP Technologies

Software, Engineering, Technical and Equipment-Related

ADC Telecommunications
AIMS Technologies
AirCom International
Andrew
Applied Spectrum Research
Ball
The Battery Connector
Lawrence Behr Associates
Berkeley Varitronics Systems
Brown & Schwaninger
Cellport Labs
CNET Subsidiary of Glenayre
Commtronics Engineering
Communication Engineers
Communications Data Services
Compuquest
Comsearch

Contact East
Coral Systems
Corp Ten International
Cromack Industries
CyberSym Control Systems
Delcom Industries
Direct Communications
International
Douglas Integrated Software
EDX Engineering
Freeman Engineering
Futurecom Systems Group
Hartford Concrete Products
Integra Software
Intelligent Technologies
Kaval Telecom
LCC International
LPKF Laser & Electronics
Lucent Technologies
Lynn-Arthur Assoc
Mech-Elec Systems
MLJ

Mobile Systems International
Modems Plus
Modular Communication
Systems
Olympic Radio
On Target Mapping
PacComm Packet Radio
Systems
PerCon
Plant Equipment
Public Safety Systems (PSSI)

RadioSoft

RadioSoft
Rayfield Communications
Real Time Strategies
Rocky Mountain
Communications
SAFCO Technologies
Sentry Services International
ServiceWare
Shaffer Communications
Group
Signal Intelligence
Slattery Software
Software Concepts
SoftWright
Survey Technologies
Synetcom Digital
TCS
TekNow
Telecommunications
Engineering Associates
TLP Technologies
Transcript International
TriTech Software Systems
UNIsite
Xymox Systems

Software, Topographic

AirCom International
Applied Spectrum Research
Carolina Global Maps
CNET Subsidiary of Glenayre
Communication Engineers
Communications Data Services
CyberSym Control Systems
EDX Engineering
LCC International
Midwest Data Services
Missing Maps East View
Cartographic
Mobile Systems International
On Target Mapping
PerCon
Rocky Mountain
Communications
Simulcast Solutions
SoftWright
Synetcom Digital

Soldering, Desoldering and Surface-Mount Repair Equipment

A P E
Alcom Electronics
Cartwright Communications
CompuSource
Contact East
David Levy
Elenco Electronics
HMC-Hub Material
Hutton Communications
Jan Communications &
Electronics
Leads Metal Products
LPKF Laser & Electronics
Marketronics
MCM Electronics
Micro Care

Looking for a
reliable mobile
computing network?



Let our experience be
your guide.

For more than a decade,
DATARADIO has been
an industry leader in
providing mobile com-
puting networks around
the globe.

DATARADIO goes the
distance to provide
customers with quality
coverage, reliability,
and cost-effective
performance.

As you chart your
course for a wireless
solution, let us give you
some direction. For
more information about
our mobile computing
network solutions, call
770-392-0002 or visit
our web site at
www.dataradio.com.

DATARADIO

Inside U.S.A.
DATARADIO Corporation
6160 Peachtree Dunwoody Road, Suite C-200
Atlanta, GA 30328
Phone: (770) 392-0002 Fax: (770) 392-9199

Outside U.S.A.
DATARADIO Incorporated
5500 Royalmount Avenue, Suite 200
Town of Mount Royal, Quebec, Canada H4P 1H2
Phone: (514) 737-0020 Fax: (514) 737-7883

Circle (48) on Fast Fact Card

I SPS-SERIES DISPATCH

a comprehensive line of integrated furniture that grows as you grow.

The Dispatch Products SPS series is designed to provide the Communication System Planner with a complete line of flexible base and stacking panels along with ergonomic accessories that can be integrated with communications control turrets, computers, monitors and other surface and rack mounted equipment.



INNOVATIVE

Universal stacking of panels and turrets
Rear access
Modular design
Cost effective

FLEXIBLE

Designed to adapt to changes quickly and easily
No special tools required to reconfigure or expand

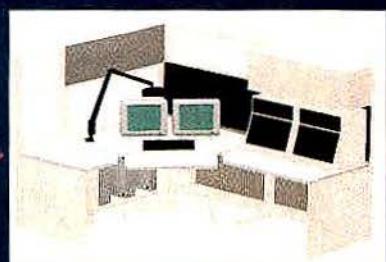
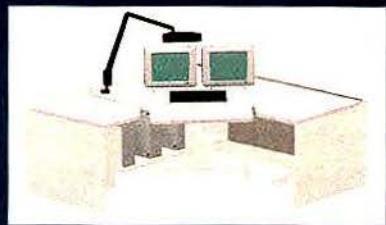
FUNCTIONAL

Performance and productivity is enhanced by creating an environment suitable for 24 hour high stress operations.

AFFORDABLE

When the initial purchase, installation, reconfigurations and expansions are totaled, the real value of the SPS Series is apparent.

WORKSTATIONS



DISPATCH PRODUCTS COMPANY

1400 E. Hanselman Road • Angola, IN 46703
Tel. 219-665-7961 • Fax: 219-665-7213
E-Mail: disprod@fwci.com

Circle (49) on Fast Fact Card

Motorola Aftermarket Products
Motorola Land Mobile
Products Sector
PACE
Primus Electronics
TESSCO
Transcrypt International
Webster Communications

Speakers

Accutech
AF CommSupply
Atlas/Soundolier
Auto-Comm Engineering
Bogen Communications
Boston Acoustics
Cartwright Communications
Comark Distributing
CompuSource
CSI/Speco

David Levy
Delcom Industries
Eastcom Industries
Electro-Comm Dist
ExCellular Communications
Fanon Courier
Hutton Communications
Marketronics
MCM Electronics
Merry Electronics
Motorola Aftermarket Products
Motorola Land Mobile
Products Sector
Pulstar Distributing
Richardson Electronics
Talley Communications
Telephonics
TESSCO
TwitCo Distributing
Whelen Engineering

Station Identifiers

Adams Distributing
AF CommSupply
Autocode
Beam Radio
CES Wireless Technologies



Communications Specialists
Control Signal
Creative Control Products
Data Signal
Delcom Industries
Eastcom Industries
Midian Electronics
Pipo Communications
Racom Products

S-Com Industries
Spectrum Communications
Talley Communications

Status Alarm Systems

AIMS Technologies
Appropriate Data Communications
Auto-Comm Engineering
Barnett Engineering
Beam Radio
Berkeley Varitronics Systems
Catcom Systems
Communications & Signals
CES Wireless Technologies
Compuquest
Conway Engineering
CRN Telemetry Devices
CTI Products
CyberSym Control Systems
Danmax Communication
Data Signal
DataCom Systems
Dataprobe
Davicom Technologies
Falcon Direct
Gronel Assoc
Hark Systems
Information Radio Technology
King Communications USA
LaMarche Mfg
Lockheed Martin
Microwave-Narda
Manon Engineering
Moseley Associates
Motorola Land Mobile
Products Sector
PageTap
PageTek
Palstar Bramco
Parkinson Electronics
Peninsula Wireless Communications
Pipo Communications
Racom Products
Seltronics Eyretel
SONIK Technologies
Speedcall
Talley Communications
Tekno Industries
Telewave
Telewave Ltd
TLP Technologies
Zetron

Surface-Mount Repair Equipment—See Logging Recorders

SWR Measuring Devices and Meters

AEA Div of Tempo Research
Alcom Electronics
AF CommSupply
Beam Radio
Berkeley Varitronics Systems
Bird Electronic
Compuquest
Delcom Industries
EAGLE
Elenco Electronics
E Gracey Electronics
Helper Instruments
Hite Electronic Sales
Hutton Communications
David Levy
Manon Engineering
Marketronics
MCM Electronics
MFJ Enterprises
Scala Electronic

Complete Communications Power Protection

SmartPro® Rackmount UPS Systems



- 700 to 3000 VA models keep critical communications systems up and running through blackouts
- Extended run and hot-swap battery capabilities available
- Line conditioning allows your equipment to operate through brownouts
- \$50,000 Ultimate Lifetime Insurance

Fits
standard
19" racks!

isobar® Rackmount Surge Suppressors



- Up to 12 outlets with two isolated filter banks that eliminate interference between connected equipment
- Up to 1200 joules of surge suppression
- \$25,000 Ultimate Lifetime Insurance



FREE Tripp Lite UPS Selector Disk



Call Today!
(773) 869-1000
Dept. MRT12
Size a Tripp Lite UPS to your communications needs.

1111 W. 35th Street Chicago, IL 60609 Fax: (773) 869-1FAX FaxBack: (773) 869-1UPS
E-mail: info@triplite.com Web: www.triplite.com

Circle (50) on Fast Fact Card

It's a "NO BRAINER" Battery Analyzer & Conditioner

Now...
at your fingertip!

Easy-To-Use... "Just one Button" gives you access to the most technically advanced and affordable analyzer/conditioner on the market today!

The Analyzer I, III & VI Series has standard features not found on other systems costing over three times as much...including:

- Charges & analyzes Nickel-Cadmium, Nickel Metal Hydride, Lead Acid & certain Lithium Ion chemistries.
- Single button operation.
- Four independent charge rates.
- Eight independent discharge rates.
- Interchangeable adapter cups.
- UL, CSA & CE approved.

Call for our comprehensive catalog describing in detail our innovative line of Analyzers/Conditioners.



800 South Broadway, Hicksville, New York 11801

In U.S. & Canada **800-221-0732**

In NY State 516-942-0011 • Fax 516-942-1944

E-Mail: w-wassoc@ix.netcom.com • Web Site: <http://www.wwassociates.com>

All specifications subject to change without notice.

Circle (51) on Fast Fact Card

W&W
ASSOCIATES

A QUALITY MANUFACTURER

Sharp Communication
Talley Communications
Tektronix
Telephonics
TESSCO
Z-Technology

TCXOs—See Channel Elements

Telephone Line Test Meters

AEA Div of Tempo Research
Alcom Electronics
Alltel Supply
Berkeley Vartronics Systems
Brunelle Instruments
CompuSource
Contact East
Conway Engineering
CZ Labs
David Levy
Elenco Electronics
Helper Instruments
HMC-Hub Material Company
Hutton Communications
Jan Communications & Electronics
Manon Engineering
Marketronics
Metro Tel
Simulcast Solutions

Test Equipment

APE
Accele Electronics
Advanced Signal
AEA Div of Tempo Research
AEMC Instruments
AirCom International

Alcom Electronics
Amplifier Research

Anritsu
Anritsu Microwave Measurements Div
AF CommSupply
Antenna Specialists (Allen Telecom)



Argent Consulting Services
AVCOM of Virginia
AVO International
Beam Radio
Berkeley Vartronics Systems
Bird Electronic
Boonton Electronics
Brunelle Instruments
BYTEK
Cal-Scope
Cartwright Communications
Christie Electric
Coaxial Dynamics
Compuquest
CompuSource
Comsat RSI/Jefra Wireless Services
Contact East
Conway Engineering
Cromack Industries
Curtis Electro Devices
David Levy
DH Marketing Manufacturers' Representative
DPS Telecom

E Tip
Eastcom Industries
EIP Microwave
Electronic Products
Elenco Electronics
EPCOM
Flexco Microwave
Fluke
GoComm Wireless (formerly Pagerola)
E Gracey Electronics
Grayson Wireless
Helper Instruments
Hewlett-Packard
Hite Electronic Sales
HMC-Hub Material Company



Hutton Communications
IFR Systems
Intelligent Technologies
Jan Communications & Electronics
Jensen Tools
KNS Electronics
LCC International



Link Communications
Linktronic Systems
Lockheed Martin Microwave-Narda
Lucent Technologies
Lyncole XIT Grounding
Marconi Instruments

Marketronics
Metro Tel
MLJ
Morrow Technologies
Motorola Aftermarket Products
Motorola Communication Test Equipment
Noise Com/Wireless Telecom Group
NS Electronics Service
Optoelectronics
PMC Assoc
Polaris Industries
Primus Electronics
Ramsey Electronics
RF Products
Riser-Bond Instruments
Rohde & Schwarz
SAFCO Technologies
Sage Instruments
Secom Systems
Signalcrafters
Simulcast Solutions
Spectracom
Sunrise Telecom
Survey Technologies
Synetcom Digital
Talley Communications
Tekno Industries
Tektronix
Telecom Analysis Systems
Telewave
TESSCO
Torfino Enterprises
ValueTronics International
Wandel & Goltermann
Wavetek
Wayne Kerr/Farnell
Webster Communications
Wisco International
Z-Technology
ZK Celltest

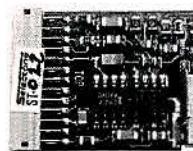
Here's a Family that Keeps its Secrets

Introducing Selectone's Full Line of Voice Encryption Products

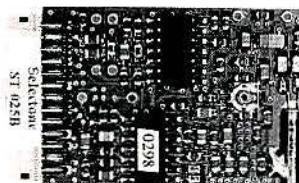
Today more than ever, the world of two-way communications needs the advantage of secure voice. The Selectone family of voice encryption products offers you a **clear choice at affordable prices**.

From the low-end inversion scramblers, the **ST-22** and **ST-20B**; to our mid-range scramblers, the **ST-25B** with digital rolling code security; to the state-of-the-art **Advantage-Plus** encryption series with time domain scrambling and digital signal processing, Selectone will provide the right product match for your specific security requirements. **No hassles. No overselling. No kidding!**

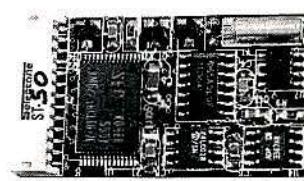
We're confident that our product line is exactly what you're looking for, and we'll provide you with a personalized quote to prove it. Simply give us a call, send us a fax or write to us with your requirements, and we'll provide you with a customized quote at no cost. It's simple. It's free. And best of all, it introduces you to the finest family of encryption products in the world. You have our name on it.



Low-end inversion scramblers.
ST-22, ST-20B



Mid-range scramblers.
ST-25B



State-of-the-Art Advantage-Plus series.
ST-50, ST-51, ST-52

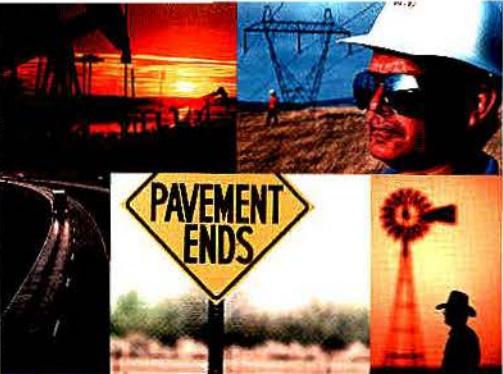
CUSTOM QUOTES AVAILABLE

1-800-227-0376

Selectone

Selectone, Inc. • 3501 Breakwater Ave. • Hayward, CA 94545 USA
Phone: 510-781-0376 • Fax: 510-781-5454 • Internet: www.selectone.com

Circle (52) on Fast Fact Card

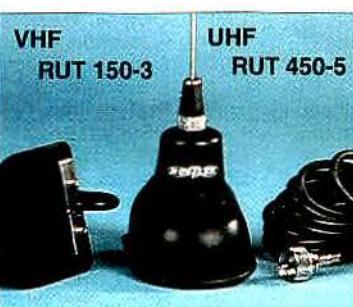


**Down in Texas
we know what
mobile
communication
is all about...**

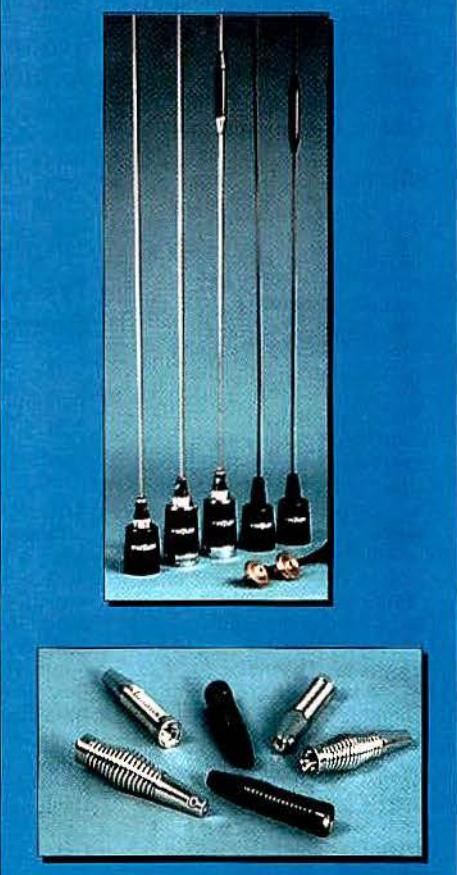
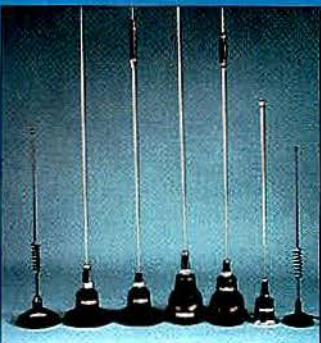
**NMO Mount
Magnetic Mount
Trunk-lip Mount**

**VHF • UHF
800/900 MHz
Low Band
Cellular • Paging
Mobile Dispatch • GSM**

**...and
HUSTLER
has the right
mobile antenna
for your project
anywhere in the
world.**



**MOBILE ANTENNAS
25-960 MHz**



**New-Tronics Antenna Corporation
One Newtronics Place
Mineral Wells, Texas 76067
(940) 325-1386 Fax (940) 328-1409
E-mail: hustler@txol.com**
**TOLL FREE ORDER LINE
(800) 949-9490**
Dealer Inquiries Welcome
Circle No. 30 on Card.

Tower Obstruction-Marking Lights

BCS Wireless
Cesco
Comsat RSI/Jefa Wireless Services
Eagle Eye Technologies
Engineered Endeavors
ERI-Electronics Research
Express Tower
Flash Technology of America
FWT
Hill Radio Communications
Hite Electronic Sales
Hughey & Phillips
King Communications USA
LeBlanc Communications
Microflect
New World Power Technology
Olympic Radio
Primus Electronics
Racom Products
ROHN Industries
Sabre Communications
Shaffer Communications Group
SSAC
Stellar Communications
Swager Communications
Teletech
Tower Structures
TowerWatch
Trylon-TSF
TWR Telecom
Valmont/Microflect
Webster Communications

Towers

AAT Communications Systems
Alltel Supply
Aluma Tower Company
American Towers & Structures
American Tower Systems
AnchorGuard
Andrew
AF CommSupply
Auto-Comm Engineering
BCS Wireless
Cartwright Communications
Central Tower
Cesco
Communication Engineers
Comsat RSI/Jefa Wireless Services
D&L Communications
Delcom Industries
Eagle Eye Technologies
Electronic Products
Engineered Endeavors
ERI-Electronics Research
Express Tower
Fibrebond Resources
FWT
Hill Radio Communications
Hite Electronic Sales
Hulse Enterprises
Hutton Communications
Illumicell
Landmark Tower
LeBlanc Communications
Microflect
Minerich
Mobile International
Mobile Systems International
Motorola Aftermarket Products
Newmark International
Fred A Nudd
Olympic Radio
OPM USA
Parkinson Electronics

PerCon
PiRod
Primus Electronics
Rapid Deployment Towers
ROHN Industries
Sabre Communications
Shaffer Communications Group
Sinclair Technologies
Stealth Network Technologies
Stellar Communications
Swager Communications
Talley Communications
Teletech
TESSCO
Tower Structures
Trylon-TSF
TWR Telecom
US Tower
Utility Tower
Valmont/Microflect

Transceivers, ACSSB
B&C Communications
Beam Radio
Earmark
Jack Daniel
Metric Systems
Synetcom Digital
Wisco International

Transceivers, Aviation (Hand-Held)

Auto-Comm Engineering
B&C Communications
Beam Radio
EPCOM
Icom America
NSI Communication
Telephonics

Transceivers, FM Conventional

0 Transceivers, FM
Conventional
B Base
M Mobile
P Portable
AAT Communications Systems
Adams Distributing
Air Comm
Anritsu
Auto-Comm Engineering
B&C Communications
Beam Radio
BearCom LP
BK Radio
Buy-Comm
California Radio
Carlson Communications
Centurion
CMC Enterprises
Communication Engineers
Communications & Signals
Comsat RSI/Jefa Wireless Services
Cooks Communications
CP Communications
C W Wolfe Communications
D&R Associates
Danmax Communication
Dataradio
Delcom Industries
DH Marketing Manufacturers' Representative
DX Radio Systems

ElectroCom Communication Systems
Elenco Electronics
EPCOM
ExCellular Communications
Falcon Direct
Fanon Courier
Futurecom Systems Group
GoComm Wireless (formerly Pagerola)
Haewa Communications
Hamtronics
Henry Radio
Hill Radio Communications
Hite Electronic Sales
Hutton Communications
Icom America
Imark Communications
Intek Global (Formerly Midland Land Mobile Radio)
Inwave
KAVIcomm

KENWOOD COMMUNICATIONS
Kenwood Communications
Kenwood Systems Group
King Communications USA
Kyodo West
Latcom
Leavitt Communications
Loudoun Communications
M&M Communications
Manon Engineering
Marketronics
MCM Electronics
Mechem Electronics
Monicor Electronics
Morcom International
Motorola Land Mobile Products Sector
Multicom
Nady Systems
NEC America
Neulink (Div of RF Industries)
Nida
Norand
NSI Communication
Olympic Radio
Optaphone Systems
Parkinson Electronics
Procomm USA
Professional Technology Systems
Radio Systems
Ranger Communications
RELM Communications
RF Technology
Ritron
Secom Systems
Sentry Services International
Sharp Communication
Shinwa Communications of America
Smith Communications Service
Solid-State Electronics
Spectrum Communications
Standard Communications/ Land Mobile Div
Stuart Electronics
SWS Security
Synetcom Digital
Tad Radio of Canada
Tait Electronics
Talley Communications
Tekk
Telemobile

TelePath
Transcript International
UNIDEN Private Radio
Comm's
Vertex Radio Communications
Wetec Electronics
Wisco International

Transceivers, FM Trunking

Adams Distributing
Air Comm
Auto-Comm Engineering
B&C Communications
Beam Radio
Centurion Communications
Comsat RSI/Jefa Wireless Services
Cooks Communications
C W Wolfe Communications
DX Radio Systems
EPCOM
ExCellular Communications
Global Wireless Communication Products
Hill Radio Communications
Hite Electronic Sales
Icom America
Imark Communications Pty
Jan Communications & Electronics
KAVIcomm
Kenwood Communications
Kenwood Systems Group
King Communications USA
Kyodo West
Latcom
MACAW Electronics
Manon Engineering
Marketronics
Mechem Electronics
NSI Communication
Olympic Radio
PCI-Pekaar Communication
Procomm USA
Professional Technology Systems PT Systems
Ritron
Secom Systems
Sentry Services International
Sharp Communication
Standard Communications/ Land Mobile Div
Stuart Electronics
SWS Security
Synetcom Digital
Tait Electronics
TelePath
Transcript International
UNIDEN Private Radio
Comm's
Vertex Radio Communications
Wisco International

Transceivers, HF SSB

Auto-Comm Engineering
B&C Communications
Beam Radio
Communication Engineers
Comsat RSI/Jefa Wireless Services
Danmax Communication
Daron World Communications
EPCOM
Global Wireless Communication Products
Harris RF Communications Div
Icom America
Kachina Communications
Marketronics
Mechem Electronics

Not even Bond has it this good.



Seneca System

*Voice, data,
GPS and images.*

The Seneca™ Secure Mobile Radio Control System represents a new generation in law enforcement communications. It works with multiple wireless transceivers to provide mobile agents with an unprecedented range of secure connectivity.

This powerful system is capable of everything from remote database access and imagery transmission to fingerprint identification and position tracking. The Seneca System meets APCO Project 25 standards, supporting all of these functions with both wideband and narrowband communications, ensuring the highest levels of security.

Harris is continually exploring ways to improve and expand the field of secure mobile communications. The Seneca System puts all the data you need right at your fingertips.

To find out more, call Harris today.



next level solutions

WIRELESS

BROADCAST

COMMUNICATIONS
PRODUCTS

HARRIS
Communications

1-800-4-HARRIS ext.3518 • 716-242-3667 • www.harris.com/communications

MFJ Enterprises
Morcom International
NSI Communication
Rohde & Schwarz
SEA
Spilsbury Communications Div
of Racal Canada
Synetcom Digital
Transcrypt International
Vertex Radio Communications
Wisco International

Trunked Radio Systems

Adams Distributing
Aerotron-Repco Systems
Air Comm
Antenna Specialists (Allen Telecom)
Auto-Comm Engineering
Beam Radio
Buy-Comm
Cellular Design
Celwave
Comm-Tech International
CES Wireless Technologies
Comsat RSI/Jefa Wireless Services
Connect Systems
D&L Communications
Daniels Electronics
Diplomat Comm Systems
DX Radio Systems
Eagle Wireless International
EPCOM
Ericsson
Gencron Engineering
Global Wireless Communication Products
Hark Systems
Hill Radio Communications

Hite Electronic Sales
IDA
Intek Global (Formerly Midland Land Mobile Radio)
Jack Daniel
Jan Communications & Electronics
KAVIcomm
Kenwood Communications
Kenwood Systems Group
King Communications USA
Kyodo West
Marketronics
NSI Communication
Olympic Radio
PacComm Packet Radio Systems
PCI-Pekaar Communication
Procomm USA
Professional Technology Systems PT Systems
RF Technology
Ritron
Scott Communications
SEA
Secom Systems
Sentry Services International
Sharp Communication
SmartLink Development
SmarTrunk Systems
Smith Communications Service
Stuart Electronics
Synetcom Digital
Tait Electronics
Telemobile

Transcript International
UNIDEN Private Radio Comm's
Vertex Radio Communications
The Warner Group
Wetec Electronics
Wisco International
World Technical Services
Zetron

Products Sector
Newmar
Northern Technologies
Primus Electronics
Solid-State Electronics
Talley Communications
TLP Technologies
Tripp Lite
Warner Electric (Bristol Plant)
Wilmore Electronics

Uninterruptible Power Systems

Alltel Supply
Andrew
AF CommSupply
Atlantic Solar Products
Auto-Comm Engineering
Beam Radio
Best Power (a unit of General Signal)
Cartwright Communications
Commutech
Comsat RSI/Jefa Wireless Services
Contact East
Diplomat Comm Systems
Direct Power & Water
Eastcom Industries
FWT
Hawker Energy Products
Hite Electronic Sales
HMC-Hub Material Company
Hutton Communications
Inmetco
Jan Communications & Electronics
LaMarche Mfg
Liebert
Marketronics
MCM Electronics
Motorola Land Mobile

Used Equipment

Air Comm
Alcom Electronics
Barnett Electronics
Buy-Comm
Communication Engineers
Comsat RSI/Jefa Wireless Services
Cooks Communications
CP Communications
C W Wolfe Communications
D&L Communications
Delcom Industries
Electronics Center
ExCellular Communications
Lunar Industries
M&M Communications
Mechem Electronics
Multicom
PCI-Pekaar Communication
Procomm USA
Radio Express
Smith Communications Service
Solid-State Electronics
StateLine Communications
Sterling Associates
SWS Security
ValueTronics International



TELEWAVE, INC.
Winter Commucation Manufacturers Since 1973

Telewave
Trident Micro Systems

....R.F. POWER AMPLIFIERS..... POWERFUL...RELIABLE...AVAILABLE

TPL Communications is known around the world for the most reliable, top performing amplifiers on the market today. We developed these innovative amplifiers by using engineering expertise, thorough product development and rigorous quality testing. For these reasons you will receive the best performing amplifiers available today.

Leadership by tradition



TPL also knows that you need amplifiers designed to fit your needs and we are ready to build to your specifications.

Give us a call to discuss your requirements.



Email - electronic@compuserve.com • www.tpl-dxrs.com

3370 San Fernando Rd., #206 • Los Angeles, CA 90065-1437 - USA • (323) 256-3000 • (800) HI POWER • FAX (323) 254-3210

Circle (37) on Fast Fact Card

Voice Processing and Message Systems

AMTELCO
Atis
Bogen Communications
Brite Voice Systems
CadCom TeleSystems
Coherent Communications Systems
CES Wireless Technologies
CompuSPEAK
Converse Technology
Converse Information Systems
CTI
Ericsson Messaging Systems
Freeman Engineering
Glenayre Electronics
Jan Communications & Electronics
JPS Communications
Linktronic Systems
Motorola Advanced Messaging Group
NATCOM (Kern Pager Repair)
Phonetix
Prism Telecom (TGA Technologies)
Real Time Strategies
Richardson Electronics
Seltronics Eyretel
Speedcall
Synetcom Digital
Zebryk Engineering
Zetron

Voice Recorders—See Logging Receivers.

Wattmeters and Directional Couplers

Alcom Electronics
Alltel Supply
AF CommSupply
Bird Electronic
Boonton Electronics
Cartwright Communications
Coaxial Dynamics
Contact East
Delcom Industries
E A G L E
Eastcom Industries
Henry Radio
Hite Electronic Sales
HMC-Hub Material
Hutton Communications
Lockheed Martin
Microwave-Narda
Manon Engineering
Marketronics
MFJ Enterprises
Microwave Filter
Motorola Land Mobile Products Sector
Primus Electronics
Sharp Communication
Signalcrafters
Sunelco
Talley Communications
Telewave
Telewave Ltd
TESSCO
ValueTronics International
Webster Communications
Wisco International

Services Directory

Accounting and Billing

ATA Information Systems
Brightpoint
Celltech Information Systems
CES Wireless Technologies
Computer Resources
Conway Engineering
Escotel Software
The Genesis Group
John Mitchell
Lynn-Arthur Assoc
Midwest Data Services
Subscriber Computing
Sunrise Credit Services

Tandem Computers

Brokerage

Communications Real Estate
Daniels & Assoc
Rosner\Mark Rosner Belmont Properties
Super Wireless Warehouse
Technostores (Headquarters)

Alexander Resources
American Tower Systems
Applied Spectrum Research
APREL Laboratories



Consultants

AAT Communications
Adcomm Engineering
The Advertising Consortium
AirCom International
Alder & Assoc

Argent Consulting Services
Atlas License & Data Services
Austin Antenna
Ball
Lawrence Behr Associates
Berkeley Varitronics Systems
BIA Research

REGULAR EXERCISE EXTENDS LIFE.



That's why your batteries need the new Telepower IQ^{five}! And our exclusive 3 year warranty extends your peace of mind.

The new Telepower IQ^{five} Battery Maintenance System provides the most cost-effective "workout" to maximize performance and life of your rechargeable batteries. With advanced condition/analyze modes, the Telepower IQ^{five} offers an innovative "Cycle Test" to form and test new batteries for optimum productivity. Optional printer provides detailed reports. For higher volume battery applications, the IQ^{ten} System has a Remote Control Unit which drives up to 16 five station banks with up to 2 amps of current per station. Both ideal for NiCd and NiMH batteries, including JBRO land mobile batteries, with the highest power ratings available. Call today for details.



JBRO
BATTERIES, INC.



Manufacturing facilities in Lisle, Illinois; Spring, Texas
Phone: 800/323-3779 • Fax: 800/237-6435 • Web Site: www.jbro.com

Circle (38) on Fast Fact Card

BCS Wireless
 Brown & Schwaninger
 Caraway Communications
 CD Communications
 Cellular Design
 CNET Subsidiary of Glenayre
 Commtronics Engineering
 Communication Engineers
 Communications Data Services
 Communications Real Estate
 Comp Comm
 Comsat RSI/Jefa Wireless Services
 Comsearch
 Comtrain
 Corp Ten International
 Crescent Communications Services
 CSI Telecommunications Radio & Microwave Engineers
 CTA Communications
 D&R Associates
 John J Davis & Associates
 Delcom Industries
 DORR Engineering Services
 E J Dott & Assoc
 Douglas Integrated Software
 Eagle Wireless International
 Electronic Products
 Escotel Software
 First Search
 Freeman Engineering
 The Genesis Group
 Frederick G Griffin PC
 Gronel Assoc
 HarTech
 Hayes Seay Mattern & Mattern
 IMT ComSys
 Institute for Disabilities Research and Training
 ITV
 Jan Communications & Electronics
 Kaval Telecom
 Knight Direct
 Lawrence Personnel
 LCC International
 Leach Mounce Architects
 Lightning Eliminators & Consultants
 Lightning Master
 Lucas & Assoc Consortium of Consultants
 Lunar Industries
 Mech-Elec Systems
 MFS Network Technologies
 MLJ
 Mobile Communications Consulting
 Mobile Systems International
 Myers Engineering International
 New World Power Technology
 911 Dispatch Services
 Olympic Radio
 Omnicom
 PerCon
 PolyPhaser
 RaCoTek
 Radio Systems
 Ramsey Electronics
 RCC Consultants
 RSI
 Herb Sachs Consulting
 SAFCO Technologies
 Scott Communications
 SGS U S Testing
 ShosteckHerschel Shosteck Associates
 SmartLink Development
 SpaceCom Systems

Spectrum Site Management
 The Strategis Group
 Super Wireless Warehouse
 Syntech Digital
 Technology Futures
 Telecommunications Engineering Associates
 Telegen Group
 Teletech
 Telewave
 Frank Thatcher Assoc
 Tower Structures
 Transcom
 Transtector Systems
 Trott Communications Group
 UNIsite
 The Warner Group
 Zebryk Engineering
Others
 American Mobile
 Telecommunications Assoc
 American Tower Systems/ Western Reg Ofc
 Applied Spectrum Research
 APREL Laboratories
 Communication Resources
 Communications Real Estate
 Comtrain
 Consumer Electronics Manufacturers Assoc
 ERA
 Lease Corporation of America
 Lightning Deterrent
 Mech-Elec Systems
 Minerich
 Mobile Systems International
 911 Dispatch Services
 On Target Mapping
 PerCon
 Synergetic Systems
 TLP Technologies
 Transamerica Distribution
 Finance
 Troy Products

Equipment Repair , Reconditioning: Mobiles, Portables, Pagers and Others

AAT Communications Systems
 ACS
 Adams Distributing
 Air Comm
 Arcom
 Berkeley Varitronics Systems
 BK Radio
 Brightpoint
 Cellular Design
 Cellular Phone Services
 Centurion Communications
 Cetacea Sound
 Clark Radio Electronics
 Communication Engineers
 Communications & Signals
 Comsat RSI/Jefa Wireless Services
 Cue Paging
 C W Wolfe Communications
 D&L Communications
 Delcom Industries
 DP Electronics
 DW Electrochemicals
 EPCM
 EPS Wireless
 Falcon Direct
 Fourth Dimension Industry
 Imark Communications Pty
 Inmetco

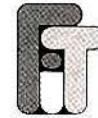
Jan Communications & Electronics
 Lett Electronics
 M&M Communications
 Marketronics
 Mech-Elec Systems
 Minilec Service
 Multicom
 NATCOM (Kern Pager Repair)
 National Pager Services
 Wireless Technologies Group
 Pager Communications
 PageRepair
 Porta-Tech
 The Radio Communications Group
 Radio Wholesale
 Ramsey Electronics
 RELM Communications
 RF Imaging & Communications
 Scott Communications
 Skyline Radio
 Smith Communications Service
 Super Wireless Warehouse
 TelePath
 Transcrypt International
 ValueTronics International
 Wenco
 Wireless Technologies (Crystronics/Pager)

FCC Regulations

Adcomm Engineering
 American Mobile
 Telecommunications Assoc
 APREL Laboratories



Argent Consulting Services
 Atlas License & Data Services
 Lawrence Behr Associates
 Berkeley Varitronics Systems
 Brown & Schwaninger
 Comsat RSI/Jefa Wireless Services
 Comsearch
 Comtrain
 CSI Telecommunications Radio & Microwave Engineers
 Delcom Industries



Forest Industries
 Telecommunications
 Interactive Systems
 Lett Electronics
 PerCon
 Personal Communications Industry Ass'n (PCIA)
 Pike & Fischer Private Radio Rules Service
 RCC Consultants
 Transcrypt International
 Teletech
 Frank Thatcher Assoc
 The Warner Group

Leasing and Rental Equipment

Burke Communications Systems

Champion Communications
 CP Communications
 Danmax Communication
 Event Rental Communication
 Global Wireless Communication Products
 Henry Radio
 Lett Electronics
 M&M Communications
 Scott Communications
 Town Communications
 ValueTronics International

Satellite Services & Equipment

Andrew
 Antenna Specialists (Allen Telecom)
 CES Wireless Technologies
 Comsearch
 IMT ComSys
 Lett Electronics
 Magellan Systems
 SpaceCom Systems
 Torfino Enterprises
 Tower Structures

Service Monitor Repair and Calibration

Alcom Electronics
 APREL Laboratories
 Automated Production Equipment APE-South
 Communication Instruments
 IFR Systems
 KNS Electronics
 LG Precision
 Marconi Instruments
 NS Electronics Service
 Ramsey Electronics
 RF Imaging & Communications
 Rohde & Schwarz
 Sinclair Technologies
 Tekno Industries
 Triton Electronics

Software Development

AIMS Technologies
 Applied Spectrum Research
 Ball
 Berkeley Varitronics Systems
 Burke Communications Systems
 CD Communications
 Cellport Labs
 Celltech Information Systems
 CNET Subsidiary of Glenayre Communications Data Services
 CES Wireless Technologies
 Compuquest
 Computer Resources
 Coral Systems
 CyberSym Control Systems
 DataBurst Technologies
 Douglas Integrated Software
 Escotel Software
 The Genesis Group
 Information Radio Technology
 Institute for Disabilities Research and Training
 Interactive Systems
 Lucent Technologies
 Lynn-Arthur Assoc
 Metric Systems
 Metroplex Mobile Data

Midwest Data Services
Mobile Systems International
On Target Mapping
PerCon
Plant Equipment
Public Safety Systems (PSSI)
Pyramid Communications
Rocky Mountain
Communications
Sentry Services International
ServiceWare
Software Concepts
SoftWright
Spillman Data Systems
Subscriber Computing
Synetcom Digital
TekNow
Tiburon
TriTech Software Systems
US West Public Safety Group
The Warner Group
Zebryk Engineering

Technician Training

Andrew



Argent Consulting Services
Automated Production
Equipment APE-South
The Battery Connector
BCS Wireless
CD Communications
CellTrain
Comsat RSI/Jefa Wireless
Services
Comtrair
Delcom Industries
Glenayre Electronics
Harris Farinon Div
Hewlett-Packard
Institute for Disabilities
Research and Training
ITV
Mobile Training Institute (MTI)
PACE
Personal Communications
Industry Ass'n (PCIA)
Plant Equipment
Ramsey Electronics
SAFCO Technologies
Randall D Self CET
Ridgewater College
SoftWright
Transcript International
Transtector Systems

Tower Installation

AAT Communications
AAT Communications Systems
American Towers & Structures
American Tower Systems
Andrew
BCS Wireless
Caraway Communications
Central Tower
Cesco
Comsat RSI/Jefa Wireless
Services
D&L Communications
Danmax Communication
Delcom Industries
Electronic Products
Engineered Endeavors
Falcon Tower Fabricators
Harris Farinon Div
Hill Radio Communications

Hulse Enterprises
Illumicell
ITV
Landmark Tower
LeBlanc Communications
Microflect
Minerich
Mobile Systems International
Fred A Nudd
Olympic Radio
OPM USA
ROHN Industries
Sabre Communications
Shaffer Communications Group
Towercom Midwest
StateLine Communications
Stealth Network Technologies
Stellar Communications
Strata Communications
Swager Communications
Teletech
Tower Structures
Tower Systems
Transcom
Trylon-TSF
TWR Telecom
US Tower
Utility Tower
Valmont/Microflect

Tower Space Rental

AAT Communications
Adams Distributing
American Tower Corporation
American Tower
American Tower Systems
American Tower Systems/
Western Reg Ofc
Antenna Sites
Cellular Design
Chicago Tower Leasing
Communication Engineers
Communications Real Estate
Crescent Communications
Services
D&L Communications
Danmax Communication
John J Davis & Associates
Delcom Industries
Diablo Communications
J Doering Communications
Falcon Tower Fabricators
Hill Radio Communications
Intrafamily Communications
Landmark Tower
LeBlanc Communications
Meridian Communications
Mobile Systems International
Olympic Radio
OPM USA
Parkinson Electronics
PB Industries
Pinnacle Towers
Quad State Towers &
Communications
Rayfield Communications
Shaffer Communications
Group
Spectrum Site Management
StateLine Communications
Teletech
TLP Technologies
Towercom Midwest LLC
Tower Site Services
Tower Technology
TowerWatch
Transcom
UNisite
U S Sitelease
Utility Tower

Wireless SCADA



- Replaces costly leased lines
- Voice & data & page process alarms
- Remotely control processes & HVAC
- 2-way conventional or trunked radio, cellphone
- Modbus compatible
- Improve emergency response
- Wireless warning systems

Call 425.820.6363

FAX 425.820.7031

Email zetron@zetron.com

WEB: <http://www.zetron.com>

ZETRON®

Circle (54) on Fast Fact Card

Company Addresses

The symbol

denotes an advertiser in this issue.
See the Ad Index
on page 120.

A

A & K
24100 Southfield Rd Ste 103
Southfield MI 48075-2850
810-569-3000
Fax: 810-569-3153

A P E
48 Coral Way MM 105.2
Key Largo FL 33037-2945
305-451-4722
Fax: 305-451-3374
E-Mail: apecorp.com
Web: www.apecorp.com

A W Sperry Instruments
245 Marcus Blvd
Hauppauge NY 11788-2001
516-231-7050; 800-645-5398
Fax: 516-434-3128
E-Mail: laricea@awsperry.com

AAT Communications
292 Fernwood Ave
Edison NJ 08837-3839
908-417-3993; 800-551-SITE
Fax: 908-417-4825

AAT Communications Systems
1854 Hylan Blvd
Staten Island NY 10305-2111
718-351-8787; 800-622-6224
Fax: 718-351-2525
E-Mail:
aatcom_ny@compuserve.com

ABM Communications
7818 Big Sky Dr Ste 119
Madison WI 53719-4983
608-827-5777; 888-477-6254
Fax: 608-827-0385
Web: www.teampro.com

AC Data Systems
7920 Meadowlark Way
Coeur d'Alene ID 83815
208-772-6645; 800-890-2569
Fax: 208-772-2115
E-Mail: acdata@surgeblox.com
Web: www.surgeblox.com

Accele Electronics
17900 Crusader Ave
Cerritos CA 90703-2631
562-809-5090; 800-788-1212
Fax: 562-809-1248

Accutech
22837 Ventura Blvd
Woodland Hills CA 91364-1224
818-888-0086; 800-456-4224
Fax: 818-888-0085
Web: www.accutech-intl.com

Ace Antenna
9231 Eton Ave
Chatsworth CA 91311-5808
818-718-1534
Fax: 818-718-2842
E-Mail: aceusa@aol.com

Ace Communications/Monitor Div
8030 E 47 St
Indianapolis IN 46226-2918
317-849-2570; 800-445-7717
Fax: 317-543-9772
Web: www.acecomms.com/scanns

Acheson Colloids
1600 Washington Ave
PO Box 6117474
Port Huron MI 48060-3489
810-984-5581
Fax: 810-984-1446

Acopian Technical
PO Box 638
Easton PA 18044-0638
610-258-5441; 800-523-9478
Fax: 610-258-2842
Web: www.acoplan.com

ACS
8200 E Pacific Place Ste 204
Denver CO 80231-3212
303-337-4811
Fax: 303-337-3084

ACS Wireless
10 Victor Square
Scotts Valley CA 95066-3558
408-438-3883; 800-995-5500
Fax: 408-438-2745
E-Mail: sales@acs.com
Web: www.acs.com

Adams Distributing
30467 Beck Rd
Wixom MI 48393-2841
248-669-7100; 800-747-4641
Fax: 248-669-6818
E-Mail:
73661.241@compuserve.com

ADC Kentrox WW
PO Box 10704
Portland OR 97296-0704
503-643-1681; 800-733-5511
Fax: 503-641-3341
E-Mail: info@kentrox.com
Web: www.kentrox.com

ADC Solitra
4900 W 78 St
Minneapolis MN 55435-5480
612-946-3136

ADC Telecommunications
P O Box 1101
Minneapolis MN 55440-1101
612-938-8080; 800-366-3891
Fax: 612-946-3292
Web: www.adc.com

Adcomm Engineering
14631 128th Ave NE
Woodinville WA 98072-4651
425-821-8827
Fax: 425-488-3952
E-Mail: adcomm@adcomm.com
Web: www.adcommeng.com

Adcour
PO Box 2649
Woburn MA 01888-1249
781-935-9944; 800-232-3557
Fax: 781-937-3499

Advance Label & Tag
1725 N McDonald
McKinney TX 75069-8230
972-542-5345; 800-466-5345
Fax: 972-548-2518
E-Mail: altag@waymark.net

Advanced Battery Systems
300 Centre St
Holbrook MA 02343-1076

781-767-5516; 800-634-8132
Fax: 781-767-4599
E-Mail: periphex@aol.com
Web: www.home.navisoft.com/
periphex

Advanced Cellular of Philadelphia
1840 County Line Rd
Huntington Valley PA 19006-1717
215-322-4600; 800-233-0013
Fax: 215-322-4606

Advanced Charger Technology
680 Engineering Dr Ste 180
Norcross GA 30092-2849
770-582-0001; 800-606-6452
Fax: 770-582-0003
E-Mail: sales@actcharge.com
Web: www.actcharge.com

Advanced Communications
1036 Woodhaven Dr
Lynchburg VA 24502

Advanced Fox Antennas
1840 County Line Rd
Huntington PA 19006
215-322-4600; 800-233-0013
Fax: 215-322-4606

Advanced Receiver Research
PO Box 1242C
Burlington CT 06013
860-485-0310
Fax: 860-485-0311

Advanced Signal
PO Box 713
Quincy IL 62306-0713
217-224-2387
Fax: 217-224-2075
E-Mail: advsig_info@advsig.com
Web: www.advsig.com

AdvanceTec Industries
451 NE 189 St
North Miami FL 33179-3908
305-651-3211; 800-881-8211
Fax: 305-651-3296
E-Mail: sales@advantec.com
Web: www.advantec.com

The Advertising Consortium
10536 Culver Blvd Ste D
Culver City CA 90232-3423
310-287-2222
Fax: 318-287-2227
E-Mail: theadco97@earthlink.net

AEA Div of Tempo Research
1221 Liberty Way
Vista CA 92083-8307
760-598-9677
Fax: 760-598-4898
Web: wwwaea-wireless.com

Aearo
90 Mechanic St
Southbridge MA 01550-2555
800-EAR-MUFF
Fax: 800-EAR-FAX-1

AEMC Instruments
99 Chauncy St
Boston MA 02111
617-451-0227; 800-343-1391
Fax: 617-423-2952
E-Mail: sales@aemc.com
Web: www.aemc.com

Aerotron-Repco Systems
2400 Sand Lake Rd
Orlando FL 32809-7680
407-856-1953; 800-950-5633
Fax: 407-856-1960
E-Mail: arssales@aerotron-
repco.com
Web: www.aerotron-repco.com

AIMS Technologies
3200 Polaris Ave Ste 26
Las Vegas NV 89102
702-253-6104
Fax: 702-253-6110
E-Mail: aimstech@anv.net
Web: www.aimstech.com

♦ Air Comm
4614 E McDowell
Phoenix AZ 85008-4508
602-275-4505; 800-288-4505
Fax: 602-275-4505

AirCom International
Devonshire House Holmesdale Rd
RH2 0BJ Reigate Surrey
United Kingdom
+44 1737 223465
Fax: +44 1737 222850
E-Mail: sales@aircom.co.uk
Web: www.aircom.co.uk

Aisin World Corp of America
2001 Butterfield Rd Ste 1450
Downers Grove IL 60515-1050
630-515-5150
Fax: 630-515-5155

♦ Alcom
P O Box 817
Eagle ID 86361

Alcom Electronics
2801 17th Ave
Gulfport MS 39051-6102
228-863-1430; 800-476-2526
Fax: 228-868-0133
E-Mail: alcomtest@worldnet.att.net
Web: home.att.net/~alcomtest

Alder & Assoc
3730 E Broadway Ste H
Long Beach CA 90803-6173
562-438-5665
Fax: 562-438-8883
E-Mail: salder@mindspring.com

Aldridge Drilling
PO Box 369 28572 N Bradley
Libertyville IL 60048-0369
847-680-5200
Fax: 847-680-1843

Alexander Resources
4854 E Onyx Ave
Scottsdale AZ 85253-1032
602-948-8225; 800-948-8225
Fax: 602-948-1081

♦ Alexander Batteries
1181-15th St SW
Mason City IA 50401-5662
515-423-8955
Fax: 515-423-1644
E-Mail: alexcust@jumppgate.net
Web: www.alexmfq.com

Alger Telecom
2902 Nebraska Ave
Santa Monica CA 90404-4109
310-264-9800
Fax: 310-264-9808

♦ All-comm
55 American Legion Highway
Revere MA 02151-5921
617-289-3000

Allen Telecom
30500 Bruce Industrial Pkwy
Cleveland OH 44139-3996
440-349-8400; 800-321-9977
Fax: 440-349-8407
Web: www.allentele.com

Allgon Mobile
7317 Jack Newell Blvd N
Fort Worth TX 76118
817-595-5999
Fax: 972-606-8413

Alligator Communications
250 N Wolfe Rd
Sunnyvale CA 94086-4510
408-737-7888
Fax: 408-738-8882

Alltel Supply
6625 The Corners Pkwy
Norcross GA 30092-3334
770-448-5210; 800-533-3161
Fax: 770-446-0420

Alpha Industries
20 Sylvan Rd
Woburn MA 01801-1885
617-935-5150
Fax: 617-824-4574

♦ Altek
217 NW 57th Ct
Miami FL 33126

Aluma Tower
PO Box 2806-MR
Vero Beach FL 32961-2806
561-567-3423
Fax: 561-567-3432
E-Mail: atc@alumatower.com
Web: www.alumatower.com

Am/Comm Systems
2398 Pine St
San Francisco CA 94115-2715
415-674-3100
Fax: 415-674-3144

American Mobile
Telecommunications Assoc
1150 18th St NW Ste 250
Washington DC 20036-3816
202-331-7773
Fax: 202-331-9062

American Nucleonics
696 Hampshire Rd
Westlake Village CA 91361
805-496-2405
Fax: 805-379-2392
E-Mail: agelpi@ancics.com

American Towers & Structures
PO Box 3241
Sioux City IA 51102-3241
712-252-0240; 800-369-0159
Fax: 712-252-0371

American Tower
3411 Richmond Ave Ste 400
Houston TX 77046-3401
713-693-0000; 800-821-0501
Fax: 713-629-6637
E-Mail: tower@aol.net

American Tower Service
9201 S 156 Pl
Gilbert AZ 85234-5028
602-497-6263; 800-648-6937
Fax: 602-497-9871

American Tower Systems
93 Delphi Rd
Stafford CT 06076-3405
860-684-4444
Fax: 860-684-9459

American Tower Systems/
Western Reg Ofc
1220 Brickyard Cove Rd
P1 Richmond CA 94801
510-236-3700 X250; 800-236-3806
Fax: 510-236-3799
E-Mail: jay@diablo.org
Web: www.towersites.com

AML Communications
1000 Avenida Acaso
Camarillo CA 93012-8712

805-388-1345
Fax: 805-484-2191
E-Mail: aml@amlj.com
Web: www.amlj.com

Amphenol Communication
& Network Products Div
One Kennedy Ave
Danbury CT 06810-5815
203-743-9272; 800-627-7100
Fax: 203-796-2032
Web: www.amphenol.com

Amplifier Research
160 Schoolhouse Rd
Souderton PA 18964-2400
215-723-8181
Fax: 215-723-5688
E-Mail: info@ar-amps.com
Web: www.ar-amps.com

AMTELCO
4800 Curtain Dr
McFarland WI 53558-9424
608-838-4194; 800-356-9148
Fax: 608-838-8367
E-Mail: jim@amtelcom.com
Web: www.amtelcom.com

♦ Anchor Graphics
1467 Lemay Dr Ste 111
Carrollton TX 75007-4932
972-242-0439
Fax: 972-242-0959

AnchorGuard
PO Box 89005
Sioux Falls SD 57109-1006
605-331-6426; 800-653-3392
Fax: 605-332-7833
E-Mail: info@anchorguard.com
Web: www.anchorguard.com

Andrew
10500 W 153rd St
Orland Park IL 60462-3071
708-349-3300; 800-255-1479
Fax: 708-349-5444
Web: www.andrew.com

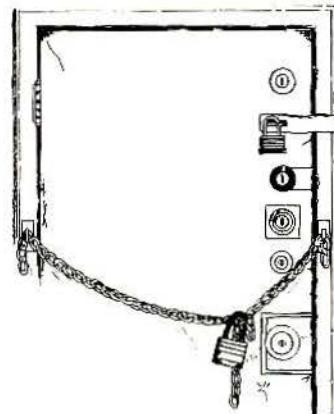
♦ Anritsu
490 Jarvis Dr
Morgan Hill CA 95037-2809
408-778-2000
Fax: 408-778-0239

♦ Antenex
2000-205 Bloomingdale Rd
Glendale IL 60139-2182
630-351-9007; 800-332-3700
Fax: 630-351-9009
E-Mail: sales@antenex.com
Web: www.antenex.com

Control your tower site. Hark makes it simple.

Save money on rekeying and control access to your tower site with the rugged and tamper-proof Card Access System from Hark.

- Detailed account of entries including name, date and time
- Control multiple sites easily and at low cost
- Proximity card reader and keypad are more durable than swipe technology
- Temporary access codes can be created
- Buzz-in and diagnostics through dial-up modem



Let Hark eliminate rekeying



even
more
▼

For technology innovations call Hark at: **1-800-367-4275**

768 Travelers Blvd, Summerville, SC 29485 PHONE (843) 875-4480 FAX (843) 873-5277

AF CommSupply
11500 W 90 St
Overland Park KS 66214-1775
913-492-6212; 800-255-6222
Fax: 913-492-2948
E-Mail: sales@afcommsupply.com
Web: www.afcommsupply.com

♦ **Antenna Sites**
7725 E Redfield Ste 101
Scottsdale AZ 85260-3428
602-998-7222; 800-346-7224
Fax: 602-998-0570
E-Mail: arizona@antenna-sites.com
Web: www.antenna-sites.com

♦ **Antenna Specialists
(Allen Telecom)**
30500 Bruce Industrial Pky
Cleveland OH 44139-3996
440-349-8400; 800-321-9977
Fax: 440-349-8407
Web: www.allentele.com

Antenna World
9500 NW 12 St Bay 5
Miami FL 33172-2830
305-471-9507; 800-637-0222
Fax: 305-471-9520
E-Mail: sales@antennaworld.com
Web: www.antennaworld.com

Antennaco
PO Box 218
Milford NH 03055-0218
603-673-3153
Fax: 603-673-4347

Antennas America
4860 Robb St Ste 101
Wheat Ridge CO 80033-2163
303-421-4063; 800-508-6532
Fax: 303-424-5065

The Antenna Co
1100 Maplewood Dr
Itasca IL 60143-3208
630-250-9900; 800-458-2820
Fax: 630-250-9917

Applied Power
1210 Homann Dr SE
Lacy WA 98503-2439
360-438-2110; 800-777-7075
Fax: 360-438-2115
E-Mail: info@appliedpower.com
Web: www.appliedpower.com

Applied Spectrum Research
453 Pine St Ste 100
Boulder CO 80302-4735
303-444-4871
Fax: 303-444-4872
E-Mail: jmurray@netcom.com

**Appropriate Data
Communications**
1200 Nicollet Mall Ste 203
Minneapolis MN 55403-2410
612-338-1230
Fax: 612-332-2500

APREL Laboratories
51 Spectrum Way
K2R 1E6 Nepean Canada
613-820-2730
Fax: 613-820-4161
E-Mail: info@aprel.com
Web: www.aprel.com

♦ **Arcom**
11420 NW 45 Pl
Sunrise FL 33323
954-748-9963; 800-567-5636
Fax: 954-748-7611
E-Mail: arcom@jet.laker.net

♦ **Argent Consulting Services**
11999 Katy Fwy Ste 590
Houston TX 77079
281-759-9580; 800-634-3947
Fax: 281-759-9656
E-Mail: argent@argentinc.com

Web: www.argentinc.com
www.argentrf.com

Argus Technologies
5700 Sidney St
V5J 5E5 Burnaby BC Canada
604-436-5900
Fax: 604-436-1233
E-Mail: sales@argus.ca
Web: www.argus.ca

ArrayComm
3141 Zanker Rd
San Jose CA 95134-1933
408-428-9080
Fax: 408-428-9083
E-Mail: intellicell@arraycomm.com
Web: www.arraycomm.com

Artech House
685 Canton St
Norwood MA 02062-2610
617-769-9750; 800-225-9977
Fax: 617-769-6334
E-Mail: artech@artech-house.com
Web: www.artech-house.com

ASC Telecom
535 Fifth Ave Rm 901
New York NY 10017-3610
212-557-3200
Fax: 212-557-3219
E-Mail: asctelecom@aol.com
Web: www.asc.de

Associates Leasing
333 W Pierce Rd Ste 200
Itasca IL 60143-1218
630-875-2902
Fax: 630-875-2902

Astrolab
4 Powder Horn Dr
Warren NJ 07059-5105
732-560-3800
Fax: 732-560-9570
E-Mail: sales@astrolab.com
Web: www.astrolab.com

♦ **Astron**
9 Autry
Irvine CA 92618-2768
949-458-7277
Fax: 949-458-0826

♦ **Astron Antenna**
22560 Glenn Dr #114
Sterling VA 20147
703-450-5517
Fax: 703-450-9753
E-Mail: astronco@monumental.com
Web: www.astronantennas.com

AT&T
227 W Monroe St Fl 5
Chicago IL 60606-5016
312-230-1000

ATA Information Systems
5 Revere Dr Ste 510
Northbrook IL 60062-8007
847-559-1990; 800-282-0031
Fax: 847-559-1414

Atis
1225 Northmeadow Parkway Ste 114
Roswell GA 30076-3859
770-664-4744; 800-688-4744
Fax: 770-664-5558

Atkinson Dynamics
405 Eccles Ave
South San Francisco CA 94080-1964
415-583-9845
Fax: 415-876-0111

Atlantic Solar Products
PO Box 70060
Baltimore MD 21237-6060
410-686-2500
Fax: 410-686-6221
E-Mail: asp219@mail.us.net

Atlas License Co & Data Services
6919 E 10th St F-5
Indianapolis IN 46219
317-351-4865; 800-252-0529
Fax: 317-351-4870
E-Mail: atlasfcc@aol.com
Web: www.members.aol.com/atlasfcc

Atlas/Soundolier
1859 Intertech Dr
Fenton MO 63026-1926
314-349-3110; 800-876-7337
Fax: 314-349-1251

ATX Research
10010 San Pedro Ste 200
San Antonio TX 78216-3847
210-979-4999; 800-789-4373
Fax: 210-979-4979
Web: www.track.com

Audiovox
185 Oser Ave
Hauppauge NY 11788-3710
516-233-3300
Fax: 516-233-3431

Austin Antenna
10 Main St
Gonic NH 03839-4623
603-335-6339
Fax: 603-335-1756

Auto-Comm Engineering
3014 Cameron St
Lafayette LA 70506-1519
318-232-9610; 800-284-1840
Fax: 318-237-8807

Autocode
1647 Elmsford Place
Westlake Village CA 91361-1520
805-497-4620
Fax: 805-494-0361
E-Mail: sales@iders.com
Web: www.iders.com

**Automated Production Equipment
APE-South**
48 Coral Way MM105.2
Key Largo FL 33037-2945
305-451-4722
Fax: 305-451-3374
E-Mail: apecorp@bridge.net

**Automation & Electronics
Engineering**
13667 Floyd Circle
Dallas TX 75243-1435
972-238-9596; 800-527-4596
Fax: 972-238-9181

AVA Electronics
4000 Bridge St
Drexel Hill PA 19026-2799
610-284-2500; 800-331-8838
Fax: 610-259-8379

♦ **AVCOM of Virginia**
500 Southlake Blvd
Richmond VA 23236
804-794-2500
Fax: 804-794-8284
E-Mail: sales@avcomofva.com
Web: www.avcomofva.com

AVL Information Systems
2225 Drake Ave Ste 17
Huntsville AL 35805-5189
205-882-1995

E-Mail: shbell@ro.com

AVO International
510 Township Line Rd
Blue Bell PA 19422-2701
215-646-9200; 800-723-2861
Fax: 215-643-2670
Web: www.avointl.com

Avtec
4335 Augusta Hwy
Gilbert SC 29054-9275

803-892-2181
Fax: 803-892-3715
E-Mail: raduncan@avtecinc.com
Web: www.avtecinc.com

AW Enterprises
6543 S Laramie Ave
Bedford Park IL 60638-6413
708-458-8989; 800-334-4884
Fax: 708-458-9023
E-Mail: awent@flash.net

Aydin Microwave
30 Great Oaks Blvd
San Jose CA 95119-1309

B

B&K Precision/MAXTEC
6470 W Cortland Ave
Chicago IL 60707-4011
773-889-1448; 800-462-9832
Fax: 773-794-9740

Badger Technology
1423 S Milpitas Blvd
Milpitas CA 95035-6828
408-957-8680
Fax: 408-957-8601

Ball
92123 Aero Dr
San Diego CA 92123
619-277-4434
Fax: 619-457-5410

Bally Engineered Structures
771 1st Ave
King of Prussia PA 19406-1401
800-242-2559; 800-24-BALLY
Fax: 610-265-5703

Band-It-Idx
PO Box 16307
Denver CO 80216-0307
303-320-4555
Fax: 303-333-6549
Web: www.hhpband-it-idx.com

Bard Mfg
1914 Randolph Dr
Bryan OH 43506-2253
419-636-1194; 800-537-4595
Fax: 419-636-2640
E-Mail: bard@bardhvac.com
Web: www.bardhvac.com

♦ **Barnett Electronics**
330 Hwy 236 W
Lonoke AR 72120-3937
501-676-5506
Fax: 501-676-2475
Web: www.barnettelec.com

Barnett Engineering
215 7710 5th St SE
T2H 2L9 Calgary AB Canada
403-255-9544; 800-268-2646
Fax: 403-259-2343
E-Mail: sales@barnett-engg.com
Web: www.barnett-engg.com

The Battery Connector
PO Box 30473
Palm Beach Gardens FL 33420-0473
561-691-1946
Fax: 561-691-1454

Battery Network
PO Box 28880
San Diego CA 92198-0880
760-740-6670; 800-327-0814
Fax: 760-480-1351
Web: www.battnet.com

Battery Products
515 W Industrial Dr PO Box 589
Hartland WI 53029-0589
414-367-2411; 800-456-2411
Fax: 414-367-8302
E-Mail: infobpi@batteryproducts.com
Web: www.batteryproducts.com

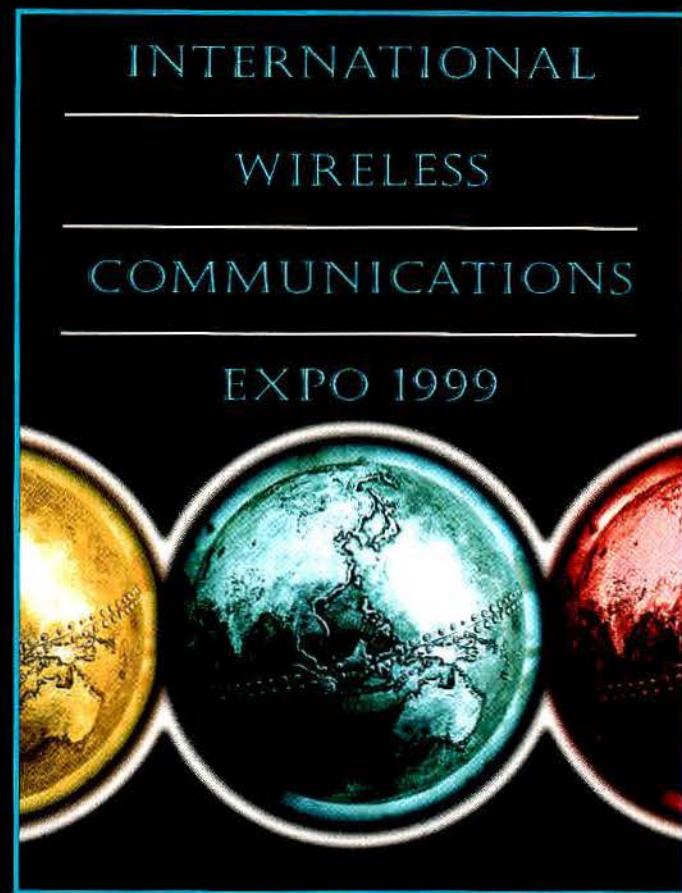


April 28-30, 1999
Las Vegas Convention Center
Las Vegas, Nevada U.S.A.

In the competitive marketplace of mobile communications, you simply cannot afford to be left behind. The International Wireless Communications Expo takes you to the forefront of merging technologies, new specialty applications and effective strategies for the future with a first rate conference program and more than 400 exhibiting companies. This show has an unparalleled mix of information, innovation and inspiration you won't want to miss!

You'll gain insight on...

- Mobile Radio Business Success
- New Technology
- Public Safety Applications
- International Business Opportunities
- Regulatory Issues
- Reselling Opportunities
- Special Commercial Applications
- And More!



Presented by:

**CELLULAR & MOBILE
International**

**Mobile Radio
Technology**

**WIRELESS
REVIEW**

With support from these other PRIMEDIA Intertec publications:
RF Design, Satellite Communications, Global Telephony, Telephony

Produced and managed by: PRIMEDIA Intertec Exhibitions & Conferences,
a division of PRIMEDIA Intertec

QUESTIONS? Call: 1-800-288-8606 or +1-303-220-0600.

CONTACT IWCE 99 TODAY TO RECEIVE THE DETAILS.

Please send me more information on ATTENDING.

Please send me more information on EXHIBITING.

I'm interested in speaking at a session.

YES! PLEASE CONTACT ME FOR MORE INFORMATION.

First Name:

Address:

Last Name:

City:

State:

Title:

Zip:

Country:

Company:

Phone:*

Fax:*

E-mail:*

*International guests, please include country and city codes

**Provide only if you wish to receive news and updates by e-mail

PLEASE RETURN TO: IWCE 99 • PRIMEDIA Intertec Exhibitions & Conferences
9800 Metcalf Avenue • Overland Park, KS 66212 U.S.A. • **Or FAX: +1-913-967-1900**

KEEP TRACK OF YOUR WORLD.

Preserve Conversations with...

...OMNICRON Professional Voice Logging Recorders. Automatically record your important phone conversations, two-way radio messages, conferences and meetings – under \$500.00 per channel

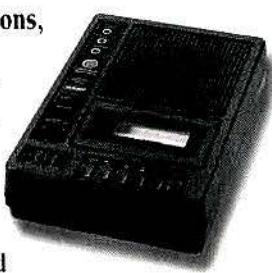
- Voice activated recording
- 2, 8, or 16 hours of solid talk time on a standard audio cassette
- Talking clock repeats time and date on optional time track
- Alarms monitor tape movement to prevent operator error
- Instant review of messages • Full line of accessories



OMNICRON
ELECTRONICS

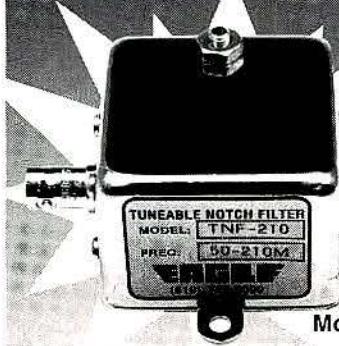
581 Liberty Highway
Putnam, CT 06260
860-928-0377
FAX: 860-928-6477

www.omnicronelectronics.com



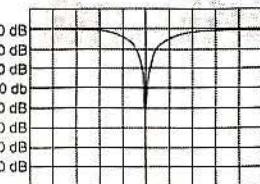
Circle (72) on Fast Fact Card

TUNEABLE NOTCH FILTERS



FEATURES:

- Low VSWR: <1.2:1
- Low Loss: <0.5 dB
- 25 Watt pass band
- Deep Notch to 35 dB
- Pass band to 3.0 GHz
- Rugged Construction
- Low Cost: starts at \$125
- Models from 0.5 to 850 MHz



Plot of Typical Notch

The TNF200 filters are available in nine models from 0.5 MHz to 850 MHz. While primarily designed to improve the dynamic range of spectrum analyzers, these filters can also be used to reduce parasitics; or to eliminate or identify out of band interference in communications systems.

Please call for FREE application note:
"Spectrum Analyzer Measurements"

EAGLE

VOICE: (520) 204-2597 • FAX: (520) 204-2568
P.O. BOX 4010 • SEDONA, ARIZONA 86340

Circle (73) on Fast Fact Card

♦ BatteryPro Systems

PO Box 160
TOL 0100 Black Diamond Canada
403-933-5393; 800-661-9401
Fax: 403-933-3233

Fax: 407-984-0434

Web: www.relm-comm.com

Bogen Communications

50 Spring St
Ramsey NJ 07446-1131
201-934-8500
Fax: 201-934-9832

BOLDER Technologies

4403 Table Mountain Dr
Golden CO 80403
303-215-7200
Fax: 303-215-2500
E-Mail: lmf@bolderlmf.com

Bomar Crystal

201 Blackford Ave
Middlesex NJ 08846-2598
732-356-7787; 800-526-3935
Fax: 800-777-2197
E-Mail: sales@bomarcrystal.com
Web: www.bomarcrystal.com

Boonton Electronics

25 Eastman's Rd PO Box 465
Parsippany NJ 07054-3721
201-386-9696
Fax: 201-386-9191

Braley Communication Systems

3905 Terry/Dianne St PO Box 546
Beaverton MI 48612-0546
517-435-3040
Fax: 517-435-3991
E-Mail: braley@ejourney.com
Web: www.ejourney.com/~braley

Brightpoint

6402 Corporate Dr
Indianapolis IN 46278-1750
317-297-6100; 800-952-2355
Fax: 317-297-6114
Web: www.brightpoint.com

Brite Voice Systems

7309 E 21st St N
Wichita KS 67206-1080
316-652-6500; 800-SEE-BRITE
Fax: 316-652-6800
E-Mail: network.services@brite.com

Broadcast Buildings

887 Cotting Ln
Vacaville CA 95688-9299
707-446-4618; 800-289-6754
Fax: 707-446-7064
E-Mail: build@broadcast-buildings.com
Web: www.broadcast-buildings.com

BCS Wireless

PO Box 730
New Glarus WI 53574-0730
608-527-5670
Fax: 608-527-5674
Web: www.bcswireless.com

Bronson

13445 Ventura Blvd Ste 236
Sherman Oaks CA 91423-3812
818-906-2281
Fax: 818-906-1862

Brown & Schwaninger

1835 K St NW Ste 650
Washington DC 20006-1203
202-223-8837
Fax: 202-659-0071

Brunelle Instruments

PO Box 1223
Newport VT 05855-1010
819-563-9096; 800-567-3506
Fax: 819-569-1408
E-Mail: jbrunel@interlinx.qc.ca
Web: www.brunelle.interlinx.qc.ca

Burke Communications Systems

742 N Taylor
Oak Park IL 60302-1750
708-383-8580
Fax: 708-386-1336

Burndy Electrical
101 E Industrial Park Dr
Manchester NH 03109-5311
603-647-5032
Fax: 603-647-5017

Buy-Comm
29669 N 45 St
Cave Creek AZ 85331-6273
602-585-3900; 800-347-4121
Fax: 602-585-6900

C

C & D Technologies
1400 Union Meeting Rd
Blue Bell PA 19422-0858
215-619-2700
Fax: 215-619-7887

CadCom TeleSystems
1296 Atlanta Rd
Enid OK 73703
800-537-1827; -0-
Fax: 405-242-8255

♦ **Cadex Electronics**
111-7400 MacPherson Ave
V5J 5B6 Burnaby BC Canada
604-451-7900; 800-565-5228
Fax: 604-451-7991
E-Mail: analyzers@cadex.com
Web: www.cadex.com

CAIG Laboratories
16744 W Bernardo Dr
San Diego CA 92127-1904
619-451-1799; 800-CAIG-123
Fax: 619-451-2799
E-Mail: caig123@aol.com
Web: www.caig.com

Cal Crystal Lab
1156 N Gilbert St
Anaheim CA 92801-1486
714-991-1580; 800-333-9825
Fax: 714-491-9825
E-Mail: sales@calcrystal.com
Web: www.calcrystal.com

Cal-Scope
473-707 Macara Ave
Sunnyvale CA 94086-2819
408-730-4573
Fax: 408-730-9537

California Microwave/Microwave Network Systems
4000 Greenbriar
Stafford TX 77477-3921
281-263-6500; 888-225-6429
Fax: 281-263-6400
Web: www.calmike.com

California Radio
10075 Tyler Ct Ste 18
Ijamsville MD 21754-8769
301-831-1150; 800-231-0103
Fax: 301-831-1170

♦ **Canadian Marconi**
415 Legget Dr PO Box 13330
K2K 2B2 Kanata Canada
613-592-7440; 888-262-2032
Fax: 613-592-7434
E-Mail: asp@kan.marconi.ca
Web: www.marconi.ca

Canamex Communications
200 Riviera Dr
L3R 5M1 Markham Canada
905-475-5557; 800-387-4237
Fax: 905-475-5568
Web: www.canamex.com.com

Capital Area Communications
99 15th St
New Cumberland PA 17070-1102
717-774-7203
Fax: 717-774-8752

Caraway Communications
9601 White Rock Trail Ste 210
Dallas TX 75238-2588
214-340-9693
Fax: 214-340-9694

Carlson Communications
PO Box 4000
Redway CA 95560-4000
707-923-4000; 800-283-6006
Fax: 707-923-2655
E-Mail: sales@optaphone.com
Web: www.optaphone.com

Carolina Global Maps
PO Box 5012
Greenville NC 27835-5012
919-757-0279; 800-248-6277
Fax: 800-321-6277
E-Mail: cgmmaps@lbagroup.com
Web: www.lbagroup.com/cgmmaps

Cartwright Communications
7812 Red Sky Dr
Cincinnati OH 45249-1632
513-489-1755; 800-543-8614
Fax: 513-489-1449
E-Mail: cartwright@cartwright.com
Web: www.cartwright.com

Catcom Systems
155 Rowntree Dairy Rd Ste 1
L4L 6E1 Woodbridge ON Canada
905-856-3811
Fax: 905-856-5972
E-Mail: 76175.540@compuserve.com

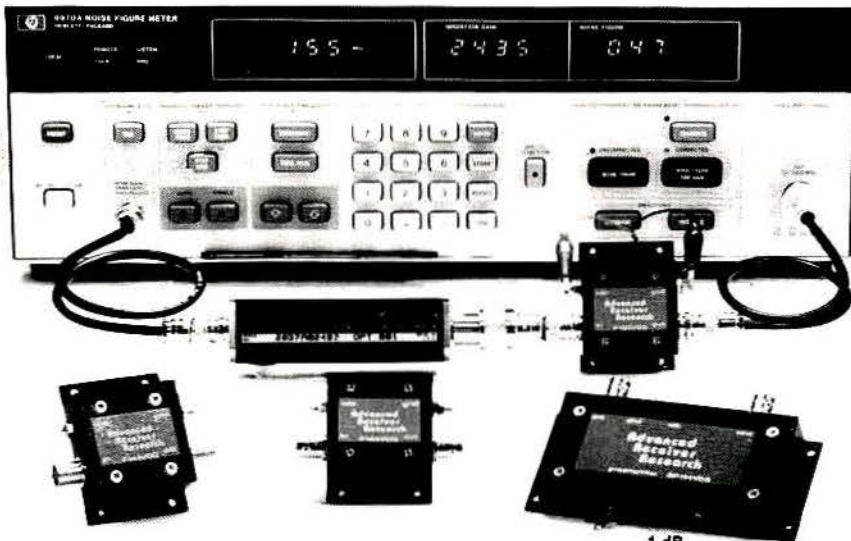
CD Communications
1137 Fernwood Court NW
Salem OR 97304-2312

800-249-9179
Fax: 503-581-1115
E-Mail: cdcomm@viser.net
Web: www.viser.net/
cdcommunications

Cellport Labs
885 Arapahoe Ave
Boulder CO 80302-6011
303-541-0722
Fax: 303-541-0731
E-Mail: patk@cellport.com
Web: www.cellport.com

Celltech Information Systems
15425 N Freeway Ste 200
Houston TX 77090-6016
281-873-2300; 800-873-2350
Fax: 281-873-3018
E-Mail: mgoodwin@celtechinfo.com
Web: www.celtechinfo.com

High Performance vhf/uhf preamps



Receive only	Freq. Ranges (MHz)	N.F. (dB)	Gain Comp. (dB)	Device Type	Price
P30VD, P35VD, P40VD, P45VD	30-35, 35-40, 40-45, 45-50	<1.3	15	0	DGFET \$ 44.95
P30VDG, P35VDG, P40VDG, P45VDG	30-35, 35-40, 40-45, 45-50	<0.5	26	+12	GaAsFET \$109.95
P150VD, P160VD, P170VD	150-160, 160-170, 170-180	<1.5	15	0	DGFET \$ 44.95
P150VDA, P160VDA, P170VDA	150-160, 160-170, 170-180	<1.1	15	0	DGFET \$ 56.95
P150VDG, P160VDG, P170VDG	150-160, 160-170, 170-180	<0.5	24	+12	GaAsFET \$109.95
P450VD, P460VD	450-460, 460-470	<1.8	15	-20	Bipolar \$ 49.95
P450VDA, P460VDA	450-460, 460-470	<1.2	16	-20	Bipolar \$ 74.95
P450VDG, P460VDG	450-460, 460-470	<0.5	16	+12	GaAsFET \$109.95
P800VDG, P830VDG, P860VDG	800-830, 830-860, 860-890	<0.6	19	+12	GaAsFET \$119.95
1 dB					
Inline (rf switched)					
SP30VD, SP35VD, SP40VD, SP45VD	30-35, 35-40, 40-45, 45-50	<1.4	15	0	DGFET \$ 74.95
SP30VDG, SP35VDG, SP40VDG, SP45VDG	30-35, 35-40, 40-45, 45-50	<0.55	26	+12	GaAsFET \$139.95
SP150VD, SP160VD, SP170VD	150-160, 160-170, 170-180	<1.6	15	0	DGFET \$ 74.95
SP150VDA, SP160VDA, SP170VDA	150-160, 160-170, 170-180	<1.2	15	0	DGFET \$ 86.95
SP150VDG, SP160VDG, SP170VDG	150-160, 160-170, 170-180	<0.55	24	+12	GaAsFET \$139.95
SP450VD, SP460VD	450-460, 460-470	<1.9	15	-20	Bipolar \$ 79.95
SP450VDA, SP460VDA	450-460, 460-470	<1.3	16	-20	Bipolar \$104.95
SP450VDG, SP460VDG	450-460, 460-470	<0.55	16	+12	GaAsFET \$139.95

Every preamplifier is precision aligned on ARR's Hewlett Packard HP8970A/HP348A state-of-the-art noise figure meter. RX only preamplifiers are for receive applications only. Inline preamplifiers are rf switched (for use with transceivers) and handle 25 watts transmitter power. Mount inline preamplifiers between transceiver and power amplifier for high power applications. System S/N improvement 6-14 dB typical. Other amateur, commercial and special preamplifiers available in the 1-1000 MHz range. Please include \$2 shipping in U.S. and Canada. C.O.D. orders add \$2. Air mail to foreign countries add 10%. Order your ARR RX only or inline preamplifier today and start hearing like never before!

**Advanced
Receiver
Research**

Box 1242 • Burlington, CT 06013 • 860-485-0310



Cellular Accessory Warehouse
48521 Warm Springs Blvd Ste 313
Fremont CA 94539-7792
510-252-9800, 800-422-9872
Fax: 510-252-9038
E-Mail: tdejong@ix.netcom.com

Cellular Design
PO Box 591
Deer Park NY 11729-0591
516-242-5900
Fax: 516-243-1366

Cellular Phone Services
403 E Gude Dr
Rockville MD 20850-1351
301-251-3700
Fax: 301-762-2430

Cellular Solutions
34 Loveton Circle
Sparks MD 21152-9202

Cellular Wholesalers
5151 Church St
Skokie IL 60077-1123
847-965-2300; 800-395-0505
Fax: 847-676-8960
Web: www.cellularwholesalers.com

Cellxion
2090 Stockwell Rd
Bossier City LA 71111
318-742-5995
Fax: 318-742-7755
E-Mail: cellxion@flash.net

Celwave
2 Ryan Rd
Marlboro NJ 07746-1899
732-462-1880; 800-321-4700
Fax: 732-462-6919
Web: www.celwave.com

Central Tower
2855 Highway 261

Newburgh IN 47630-8146
812-853-0595
Fax: 812-853-6652
Web: www.centraltower.com

♦ Centurion Communications
892 N Delsea Dr
Vineland NJ 08360-2744
609-794-8000
Fax: 609-794-8989
Web: www.centurioncomm.com

Centurion International
PO Box 82846
Lincoln NE 68501-2846
402-467-4491; 800-228-4563
Fax: 800-826-3774
E-Mail: sales@centurion.com
Web: www.centurion.com

CeoTronics
2340 Trinity Mills Ste 112
Carrollton TX 75006-1943
972-416-9500
Fax: 972-416-9580

Cerulean Technology
300 Nickerson Rd
Marlborough MA 01752-4694
508-460-4000
Fax: 508-460-4099
E-Mail: info@cerulean.com
Web: www.cerulean.com

Cesco
PO Box 970
Powell OH 43065-0970
614-846-4733; 800-642-7698
Fax: 614-846-0864
E-Mail: cesco@beol.net

Cetacea Sound
2850 Lamb Place Ste 5
Memphis TN 38118-1540

901-363-3856
Fax: 901-367-1420

Champion Communications
1610 Woodstead Ct Ste 330
The Woodlands TX 77380
281-362-0144; 800-614-6500
Fax: 281-354-1901
E-Mail: dornakk@champcom.com

♦ Channel Element HQ
4120 Kirby Ave
Cincinnati OH 45223-2223
513-542-5066; 800-237-9654
Fax: 513-542-8870
E-Mail: channel@fuse.net
Web: home.fuse.net/cehinc

♦ ChargeGuard
400 Highland Ave
Altoona PA 16602-2800
814-941-4100; 800-458-3410
Fax: 814-942-7064

Chase Communications
St Leonards Rd Mortlake
SW14 7LY London United Kingdom
+44 181 392 5700
Fax: +44 181 876 5928
E-Mail: 106307.2371@compuserve.com

♦ Chicago Tower Leasing
105 Murphy Lake Rd
Park Ridge IL 60068-2893
847-823-7713

Childs Antennas
247 Main St E
Waterville MN 56096-1467
507-362-4214; 800-533-0998
Fax: 507-362-4215

Christie Electric
18120 S Broadway
Gardena CA 90248-3536

310-715-1402
Fax: 310-618-8368
E-Mail: sales@christiecorp.com

Cimarron Technologies
934 S Andreasen Dr Ste G
Escondido CA 92029-1919
760-738-3282; 800-487-7184
Fax: 760-480-0233
E-Mail: Cimarron@cts.com
Web: www.cimtechcorp.com

♦ Citel America
1111 Parkcentre Blvd Ste 340
Miami FL 33169-5365
305-621-0022; 800-248-3548
Fax: 305-621-0766
E-Mail: citel4u@ix.netcom.com
Web: www.citelprotection.com

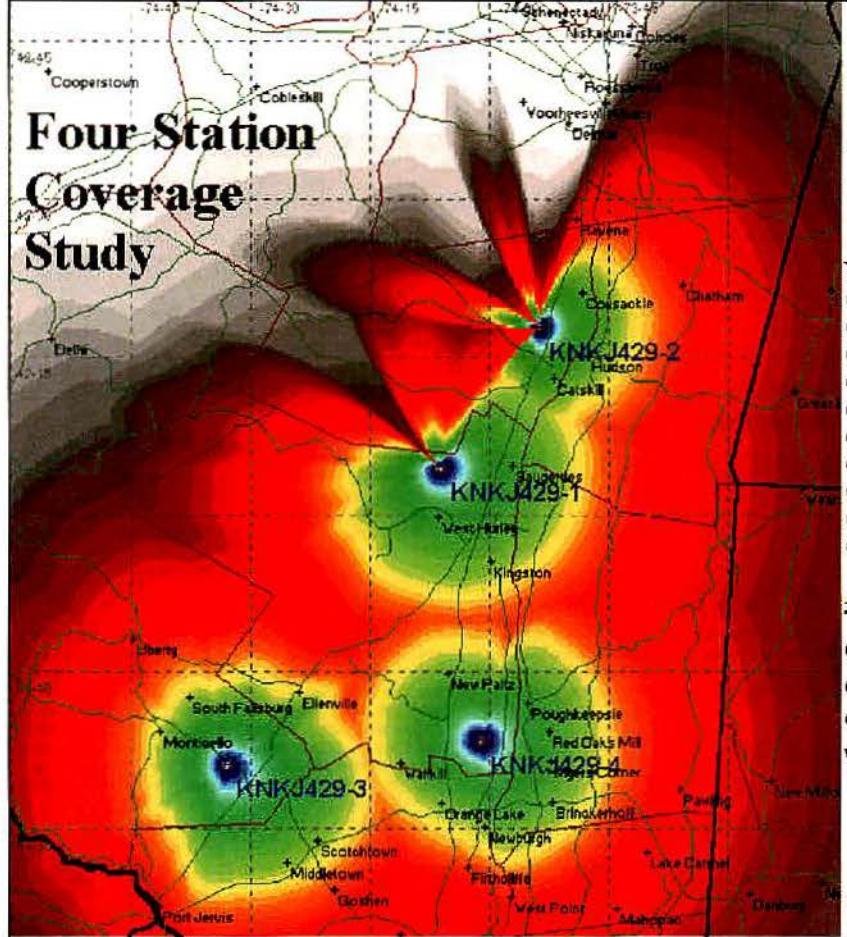
Citadel Computer
29 Armory Rd
Milford NH 03055-3456
603-672-5500
Fax: 603-672-5590
E-Mail: sales@citadelcomputer.com
Web: www.citadelcomputer.com

Clark Radio Electronics
550 W Pacific St
Blackfoot ID 83221-1728
208-785-1430
Fax: 208-785-0001
E-Mail: cre@srv.net

The Clip
218 Waiku Rd
Ridgewood NJ 07450-2352
201-652-2500; 800-THE-CLIP
Fax: 201-652-1098
Web: www.theclip.com

♦ CMC Enterprises
434 CrottsLane
Winston-Salem NC 27107-9061

Four Station Coverage Study



RadioSoft

Announces the release of
the NEW Version 2.0 of
ComStudy for Windows

You asked for lots of expanded features:

- 256 Colors for Contours and Coverage
- TIA Frequency Coordination Compliance
- Simple Runtime Overlay Management
- Transmitter Database Import/Export
- Individual Station Editing in Systems
- Individual System Matrix Recalculation
- Area Reliability Analysis and Mapping
- True 32 bit Operation (Win 95, 98, NT)
- Increased Accuracy (Land Uses added)
- More Interference Algorithms

And RadioSoft Delivers!

ComStudy 2.0 is available as a 15 day evaluation: call **888.RADIO95** (USA) or **904.426.2521** or check our website: www.RADIOSOFT.COM for details.

Aggressively Priced!

Special pricing for all current users of propagation software and overlays!

RADIOSOFT IS A CUSTOMER FRIENDLY COMPANY
109 W. KNAPP AVENUE, EDDIEWATER FL 32132

Circle (75) on Fast Fact Card

910-769-2885
Fax: 910-769-0403

CNET, Subsidiary of Glenayre
4975 Preston Park Blvd Ste 800
Dallas TX 75093
972-867-3333; 800-332-2638
Fax: 972-867-6800
E-Mail: info@cnetinc.com
Web: www.cnetinc.com

Coaxial Dynamics
15210 Industrial Pkwy
Cleveland OH 44135-3308
216-267-2233; 800-COAXIAL
Fax: 216-267-3142
E-Mail: coaxial@apk.net
Web: www.coaxial.com

Coded Communications
1939 Palomar Oaks Way
Carlsbad CA 92009-1307
619-431-0077; 800-228-6367
Fax: 619-431-1372
E-Mail: safety@coded.com
Web: www.coded.com

Coherent Communications Systems
45085 University Dr
Ashburn VA 20147-2745
703-729-6400; 800-443-0726
Fax: 703-729-6152
Web: www.coherent.com

Com-Rad Industries
PO Box 88
Wilson NY 14172-0088
716-751-9945
Fax: 716-751-9879
E-Mail: untenna@aol.com
Web: www.members.aol.com/untenna

Comark Distributing
829-A Purser Dr
Raleigh NC 27603-4152
919-779-2708; 800-777-2708
Fax: 919-779-5189

♦ Comm-Net 2000 Comm & Mfg
PO Box 20 (5409 NE Stephens)
Winchester OR 97495-0020
541-672-6475; 800-283-5158
Fax: 800-337-6475
E-Mail: comm2000@jeffnet.org
Web: www.makewebs.com/comm2000

Commonwealth Communications Industries
9998 Lickinghole Rd
Ashland VA 23005-3423
804-798-9128; 800-633-8844
Fax: 804-798-5114

♦ Commscope-General Instrument
PO Box 1729 1375 Lenoir-Rhyne
Hickory NC 28603-1729
704-459-5030; 800-982-1708
Fax: 704-459-5099
Web: www.commscope.com/

Comm-Tech International
5401 Alhambra Dr Ste B
Orlando FL 32808-7081
407-291-9009
Fax: 407-291-9081
E-Mail: krypticorl@aol.com

Commtronics Engineering
PO Box 262478
San Diego CA 92196-2478
619-578-9247
Fax: 619-578-9247
E-Mail: bcheek@cls.com
bcheek@san.rr.com
Web: www.compuserve.com/homepages/bcheek

Communication Engineers
33 Tower Ln

Clarksville NY 12041-1206
518-768-2300; 301-384-0700
Fax: 518-768-4611
E-Mail: commengrs@aol.com

Communication Instruments
1714 SW 23rd St
Loveland CO 80537-6949
970-962-9998; 800-288-8223
Fax: 970-962-3991

Communication Resources
PO Box 141397
Cincinnati OH 45250-1397
606-491-5410
Fax: 606-491-4340

Communications & Signals
152 Floyd Ave
Bloomfield NJ 07003-5610

201-743-7517
Fax: 201-743-3195

♦ Communications Data Services
1303 N Fillmore St 2nd Fl
Arlington VA 22201
703-558-0510; 800-441-0034
Fax: 703-558-0524
E-Mail: info@comm-data.com
Web: www.comm-data.com

CES Wireless Technologies
925-122 S Semoran Blvd
Winter Park FL 32792-5313
407-679-9440; 800-327-9956
Fax: 407-679-8110
E-Mail: sales@cesusa.com
Web: www.ceswireless.com

Communications Real Estate
PO Box 2523

Littleton CO 80161-2523
303-220-9100
Fax: 303-742-1993
E-Mail: comrealest@aol.com
Web: www.comrealest.com

♦ Communications Specialists
426 W Taft Ave
Orange CA 92865-4224
714-998-3021; 800-854-0547
Fax: 800-850-0547

CommuniTech
321 Bond St
Elk Grove Village IL 60007-1231
847-439-4333 X405
Fax: 800-783-7800
E-Mail: david@communitech.com
Web: www.communitech.com

D I S P A T C H S O L U T I O N S

Introducing Instrument Associates' quality and feature-packed solutions at prices everyone can afford.

- 2 Year Warranty
- User/Installer Manual Included
- IA Quality and Support



ILD1000 LOCAL DESKSET ITR1000 TONE REM. DS IDR1000 DC REM. DS IDA1000 DC REM. ADAPTER

Selectable Monitor	Programmable 4-Frequency/Function Control	Programmable 4-Frequency/Current Control	Multiple DC Remote Deskset Support
Intercom	Parallel Transmit Audio	Parallel Transmit	2-Channel Control
Selectable Parallel	Intercom Capability	Audio	Monitor
Transmit Audio Mute	Selectable Off-Hook	Intercom Capability	Full-Duplex Capable with 2- or 4-wire
Selectable Off-Hook Monitor	Monitor	DC/DTL	Adjustable Receive Input
Selectable Local Speaker	Selectable Off-Hook Local	Selectable Off-Hook	Sensitivity and Transmit
Full-Duplex Cordable Handset	Speaker	Local Speaker	Output Levels
Front-Panel Audio Mute and Unmute	Front-Panel Audio Mute and Unmute	Front-Panel Audio Mute and Unmute	Selectable Input/Output
Parallel Transmit and Monitor LEDs	Internal Microphone and Speaker	Internal Microphone and Speaker	Logic Control
Internal Microphone and Speaker			Accessory Port
			Modular Phone-Line
			Connections on Back

GAI-TRONICS CORPORATION
Instrument Associates Division

2455 Harbor Avenue
P.O. Box 13127
Memphis, Tennessee 38113
Voice: 888-254-9155
Fax: 901-948-8855
E-Mail:
iainfo@gai-tronicsMR.com
www.gai-tronicsMR.com

Comp Comm
One Echelon Plc Ste 100
227 Laurel Rd
Voorhees NJ 08043-2331
609-770-1234
Fax: 609-770-0111
E-Mail:
compcomm@compcomminc.com
Web: www.compcomminc.com

Comprod Communications
138 de la Barre Ste 2
J4B 2X7 Boucherville (Montreal)
Canada
514-641-1454
Fax: 514-641-4616
E-Mail: mail@comprodcom.com
Web: www.comprodcom.com

Compuquest
366 S Main St 2nd Fl
Bartlett IL 60103-4423
630-830-2700; 800-722-2353
Fax: 630-830-0877
E-Mail: sales@compuquestinc.com
Web: www.compuquestinc.com

CompuSource
705 Larry Ct
Waukesha WI 53186-1811
414-798-1101
Fax: 414-798-1181
E-Mail: compusrc@execpc.com

CompuSPEAK
15065 W 116th St
Olathe KS 66062-1098
913-491-3444
Fax: 913-491-9399
E-Mail: igorsuch@compuspeak.com
Web: www.compuspeak.com

◆ **Computer Resources**
304 Cahaba Valley Cir
Pelham AL 35124-1148

205-987-1523
Fax: 205-987-1709
E-Mail: jeff@crinc.com

Comsat RSI/Jefa Wireless Services
1108 Dobie Dr
Plano TX 75074-5322
214-424-5680
Fax: 214-423-5862

Comsearch
2002 Edmund Halley Dr
Reston VA 20191-3436
703-620-6300; 800-318-1234
Fax: 703-476-2720
Web: www.comsearch.com

Comtelco Industries
501 Mitchell Rd
Glendale Heights IL 60139-2582
630-790-9894; 800-634-4622
Fax: 630-790-9799

Comtrain
1303 11th St
Monroe WI 53566-1744
608-329-4840
Fax: 608-329-4851
E-Mail: comtrain@inwaug.com

Comverse Technology
170 Crossways Park Dr
Woodbury NY 11797-2048
516-677-7200
Fax: 516-677-7355
E-Mail: esp@comverse.com
Web: www.comverse.com

Comverse Information Systems
17661 Cowan Ave
Irvine CA 92614-6031
714-622-1617; 800-967-1028
Fax: 714-622-1637
E-Mail: sandra_sick@comverse.com

Concept Seating
N76 W30500 Hwy VV
Hartland WI 53029
414-966-0900; 800-892-5563
Fax: 800-550-2298

Conductus
969 W Maude Ave
Sunnyvale CA 94086-2802
408-523-9950
Fax: 408-523-9999
E-Mail: info@conductus.com
Web: www.conductus.com

Connect Systems
2259 Portola Rd
Ventura CA 93003-7724
805-642-7184; 800-545-1349
Fax: 805-642-7271
E-Mail: sales@connectsystems.com
Web: www.connectsystems.com

**Consumer Electronics
Manufacturers Assoc**
2500 Wilson Blvd
Arlington VA 22201-3834
703-907-7600
Fax: 703-907-7601
Web: www.cemacity.org

Contact East
335 Willow St S
North Andover MA 01845-5995
978-682-2000; 800-225-5370
Fax: 978-688-7829
E-Mail: service@contacteast.com
Web: www.contacteast.com

◆ **Control Signal**
1985 S Depew Ste 7
Denver CO 80227-3700
303-989-8000; 800-521-2203
Fax: 303-989-8003

Conway Engineering
8393 Capwell Dr

Oakland CA 94621-2123
510-568-4028; 800-626-6929
Fax: 510-568-1397
E-Mail: conway@crl.com
Web: www.conway-engineering.com

Cooks Communications
360 N Broadway
Fresno CA 93701-1510
209-233-8818; 800-233-8818
Fax: 209-268-8506

Copeland Engineering
PO Box 120036
Chula Vista CA 91912-3136
619-585-3217; 800-357-7514
Fax: 619-426-0333
Web: www.copelandengineering.com

Coral Systems
1500 Kansas Ave Ste 2E
Longmont CO 80501-6540
303-772-5800
Fax: 303-772-8230
E-Mail: nlaundy@coralsys.com
Web: www.coralsys.com

Corp Ten International
PO Box 20177
Baltimore MD 21284-0177
410-472-4696; 800-411-2675
Fax: 410-472-4416
E-Mail: sales@corpten.com
Web: www.corpten.com

Cortana
PO Box 2548
Farmington NM 87499-2548
505-325-5336; 888-325-5336
Fax: 505-326-2337
E-Mail: cortana@cyberport.com

CP Communications
4 Executive Plaza
Yonkers NY 10701-6803
914-378-1700; 800-762-4254
Fax: 914-423-6689
E-Mail: sales@cpcomms.com
Web: www.cpcomms.com

CPI
3200 Patrick Henry Dr
Santa Clara CA 95054-1816
408-749-6105
Fax: 408-496-6235

◆ **CPI Communications**
1186 Commerce St
Richardson TX 75081-2307
972-437-5320; 800-869-9128
Fax: 972-437-5360

CPI SATCOM Div
811 Hansen Way PO Box 51625
Palo Alto CA 94303
650-846-3700
Fax: 650-424-1744
E-Mail: marketing@satcom.cpii.com
Web: www.cpii.com/satcom

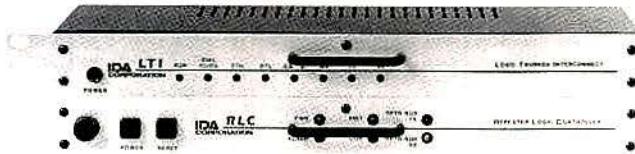
Creative Control Products
3185 Bunting Ave
Grand Junction CO 81504-6029
970-434-9405

Creative Solutions
14853 Grantley Dr
Chesterfield MO 63017-5567
314-537-9850; 800-257-0859
Fax: 314-537-9850

**Crescent Communications
Services**
PO Box 9505
Tacoma WA 98409-0505
253-475-7958; 800-562-0036
Fax: 253-475-8510
E-Mail:
bobp@crescommservices.com
Web: www.crescommservices.com

CRN Telemetry Devices
1515 Middle Country Rd

**AT IDA WE DON'T
PUT THE SAME PRICE
ON PERFORMANCE AS
THE OTHER GUY\$.**



450/800/900/220 MHZ COMPATIBLE.

Advanced SMR Trunking Logic and Interconnect that
improves your return on investment because you invest less
to begin with. That's why IDA makes the most SENSE.

IDA CORPORATION
1345 West Main Ave., Fargo, ND 58103
www.idaco.com

Call us today:
1(800)627-4432
1(701)280-1122
FAX 1(218)233-1886

Circle (77) on Fast Fact Card

Centerreach NY 11720-3513
516-696-2769
Fax: 516-698-7943
E-Mail: crnx@aol.com
Web: www.zafu.com/cm

Cromack Industries
22 Rockland Rd
Greenfield MA 01301-1130
413-774-6500; 800-603-5140
Fax: 413-774-6291
E-Mail: sales@cromack.com
Web: www.cromack.com

Cruisers
988 Rickett Rd
Brighton MI 48116
810-229-0122; 800-963-2580
Fax: 810-229-0124
E-Mail: cruisers@bignet.net
Web: www.cruisercorp.com

CSI Telecommunications Radio & Microwave Engineers
PO Box 29002
San Francisco CA 94129-0002
415-751-8845
Fax: 415-387-7201

CSI/Speco
1172 Route 109
Lindenhurst NY 11757-1029
516-957-8700; 800-645-5516
Fax: 516-957-9142

CSS Power
10552 Philadelphia Rd
White Marsh MD 21162-3423
410-344-1000; 800-780-3120
Fax: 410-344-1013

CTA-Communications
PO Box 4579
Lynchburg VA 24502-0579
804-239-9200
Fax: 804-239-9221

CTI
PO Box 780
Corinth MS 38835-0780
601-287-8081; 800-752-3646
Fax: 601-287-9427

♦ **CTI Products**
1211 W Sharon Rd
Cincinnati OH 45240-2916
513-595-5900
Fax: 513-595-5983
E-Mail: info@ctiproducts.com
Web: www.ctiproducts.com

Cubic Communications
9535 Waples St
San Diego CA 92121-2953
619-643-5800
Fax: 619-643-5803
E-Mail: denise.leger@cubic.com
Web: www.cubiccomm.com

Cue Paging
5 Corporate Pk Ste 100
Irvine CA 92606
714-752-9200; 800-824-9755
Fax: 714-833-9336
Web: www.cue.net

Curtis Electro Devices
4345 Pacific St
Rocklin CA 95677-2117
916-632-0600; 800-332-2790
Fax: 916-632-0636
E-Mail: cedmail@aol.com
Web: www.curtsselectro.com

Cushcraft
48 Perimeter Rd PO Box 4680
Manchester NH 03103-3327
603-627-7877; 800-258-3860
Fax: 603-627-1764
E-Mail: loraineg@cushcraft.com
Web: www.cushcraft.com

Cutler-Hammer
6107 6th St SE
T2H 1L9 Calgary AB Canada
403-259-3200
Fax: 403-253-0663

CyberSym Control Systems
PO Box 2633
Christiansburg VA 24068-2633
540-268-5400
Fax: 540-268-1590

Cycomm
6665 SW Hampton
Portland OR 97223-8357
503-620-1024; 800-367-7748
Fax: 503-620-8089

CZ Labs
PO Box 126
Congers NY 10920-0126
914-268-5056; 800-423-2322
Fax: 914-268-5350
E-Mail: czlabs@rcknet.com
Web: www.czlabs.com

D

D&L Communications
3512 Cavalier Dr
Fort Wayne IN 46808-4420
219-484-0466; 800-336-6825
Fax: 219-471-5294
Web: www.dlcom.com

D&R Associates
PO Box 3096
Peoria IL 61612-3096
309-691-4299
Fax: 309-691-4299

Daniels & Assoc
3200 Cherry Creek S Dr Ste 500
Denver CO 80209-3228
303-778-5555
Fax: 303-778-5599
Web: www.bdaniels.com

Daniels Electronics
43 Erie St
V8V 1P8 Victoria BC Canada
250-382-8268; 800-664-4066
Fax: 250-382-6139
E-Mail: sales@danelec.com
Web: www.danelec.com

Danmax Communication
PO Box 2640
X1A 2P9 Yellowknife NWT Canada
403-873-6961; 800-661-0806
Fax: 403-873-6861

♦ **DAPA Communications**
One DAPA Complex
182-A E Union St
Allegany NY 14706-1328
716-373-7228; 800-325-3272
Fax: 716-373-5758
E-Mail: stone@dapacom.com
Web: www.dapacom.com

Data Express
12833 Monarch St
Garden Grove CA 92841-3921
714-895-8832
Fax: 714-895-6994

Data Signal
2403 Commerce Lane
Albany GA 31707-4633
912-883-4703; -0-
Fax: 912-883-4766

DataBurst Technologies
6706 Raytown Rd
Kansas City MO 64133-5242
816-313-2383; 800-400-1996
Fax: 816-313-2391
E-Mail: databursti@aol.com
Web: www.databurst.com

DataCom Systems
520 N 30th
Quincy IL 62301-3604
217-222-0160
Fax: 217-222-0912

Dataprobe
11 Park Place
Paramus NJ 07652-3618
201-967-9300
Fax: 201-967-9090
E-Mail: sales@dataprobe.com
Web: www.dataprobe.com

♦ **Dataradio**
6160 Peachtree Dunwoody Rd
Ste C200
Atlanta GA 30328-4503
770-392-0002
Fax: 770-392-9199
Web: www.dataradio.com

Dataworld
PO Box 30730
Bethesda MD 20824
800-368-5754
Fax: 301-656-5341
E-Mail: ed@dataworld.com

Datumtech
2275 Wehrle Dr
Williamsville NY 14221-7020
716-632-8285
Fax: 716-632-0435
E-Mail: sales@datumtech.com
Web: www.datumtech.com

Datron World Communications
304 Enterprise St
Escondido CA 92029-1297
619-747-1079
Fax: 619-741-1658
E-Mail:
datron@powergrid.electricli.com

Davicom Technologies
2765 de l'Industrie
G8Z 3X9 Trois-Rivieres Canada
819-370-4343; 800-465-4343
Fax: 819-370-4353
E-Mail: davicom@davicom.com
Web: www.davicom.com

David Clark
360 Franklin St Box 15054
Worcester MA 01604-4916
508-571-5800; 800-900-3434
Fax: 508-753-5827
E-Mail: sales@davidclark.com
Web: www.davidclark.com

David Levy
12753 Moore St
Cerritos CA 90703-2143
562-404-9988; 800-421-3536
Fax: 562-404-9698
E-Mail: dlcw@aol.com
Web: www.blackwidowsecurity.com

DBB Unlimited
216 S Main Ste D
Jacksboro TX 76458-2320
940-567-3533; 800-753-8459
Fax: 940-567-3834
E-Mail: dbbunlimi@aol.com
Web: www.dbbunlimited.com

♦ **Decibel Products**
(Allen Telecom)
8635 Stemmons Fwy
Dallas TX 75247-3701
214-631-0310; 800-676-5342
Fax: 214-819-4668
E-Mail:
marketing@decibelproducts.com
Web: www.decibelproducts.com

Delcom Industries
120 Christie Ln
Selma AL 36701-6917
334-872-2024

Fax: 334-872-2024
E-Mail: delcomindustries@juno.com

Delta Electronics Mfg
416 Cabot St PO Box 53
Beverly MA 01915-3152
978-927-1060
Fax: 978-922-6430
E-Mail: sales@deltarf.com
Web: www.deltarf.com

Destin Thomas Products
PO Box 23276
Ventura CA 93002-3276
805-643-1884; 800-644-2428
Fax: 805-643-1887

DH Marketing Manufacturers' Representative
6015 Lohman Ford Ste 101
Lago Vista TX 78645
800-966-3357; 800-966-3357
Fax: 512-267-7760
E-Mail: dhlago@aol.com

Diablo Communications
1220 Brickyard Cove Rd Ste 200
Point Richmond CA 94801-4120
510-236-3700
Fax: 510-236-1741
E-Mail: sales@diablo.org

Dictaphone
3191 Broadbridge Ave
Stratford CT 06497-2566
203-381-7000; 800-447-7749
Fax: 203-386-8595
E-Mail: Idlaur@dictaphone.com
Web: www.dictaphone.com

Digital Dispatch Systems
11920 Forge Pl
V7A 4V9 Richmond Canada
604-241-1441
Fax: 604-241-1440
E-Mail: sales@digital-dispatch.com
Web: www.digital-dispatch.com

Digital Microwave
170 Rose Orchard Way
San Jose CA 95134-1396
408-943-0777
Fax: 408-944-1802
E-Mail: info@dmcwave.com

Digital Recorders
PO Box 14068
Research Triangle Park NC 27709-4068
800-222-9583
Fax: 800-849-2947
E-Mail: mkhatt@dgrec.com

Dinet
2611 Temple Heights Dr
Oceanside CA 92056-3582
760-724-5355; 888-345-2433
Fax: 760-724-6209

Diplomat Comm Systems
#3 Sumerlea Court, Harriard RG24 2PN Basingstoke Hants United Kingdom
+44 1256 381656
Fax: +44 1256 381571
E-Mail: sales@diplomat.co.uk
Web: www.diplomat.co.uk

Direct Communications International
PO Box 929
Franktown CO 80116-0929
303-688-8071; 800-880-8071
Fax: 303-660-2158
E-Mail: sales@dcico.com
Web: www.dcico.com

Direct Power & Water
3455 A Princeton NE
Albuquerque NM 87107-2027
505-889-3585
Fax: 505-889-3548
E-Mail: dirpowdd@indirect.com

♦ **Dispatch Products**
1400 E Hanselman Rd
Angola, IN 46703
219-665-7961; 800-496-7750
Fax: 219-665-7213

♦ **Doppler Systems**
PO Box 2780
Carefree AZ 85377-2780
602-488-9755
Fax: 602-488-1295
E-Mail: info@dopsys.com
Web: www.dopsys.com

Dorr Engineering Services
2640 Marquita Place
Carlsbad CA 92009-8135
760-944-3968; 800-791-8422
Fax: 760-944-1558
E-Mail: dorr_eng@pacbell.net

♦ **Doug Hall Electronics**
815 E Hudson St
Columbus OH 43211-1199
614-261-8871
Fax: 614-261-8805
E-Mail: sales@dhco.com
Web: www.dhco.com

♦ **Douglas Integrated Software**
1350-E Mahan Dr Ste 160
Tallahassee FL 32308-5101
850-906-0748; 800-845-0408
Fax: 850-906-0747
E-Mail: douglas@polaris.net
Web: www.polaris.net/~douglas

Dowit Service
PO Box 433
Towaco NJ 07082-0433
201-812-9070; 800-524-0253
Fax: 201-812-9563

DP Electronics
152 Floyd Ave

Bloomfield NJ 07003-5610
201-748-6334
Fax: 201-743-3195

DPS Telecom
4922 E Yale Ave
Fresno CA 93727-1517
209-454-1600; 800-622-3314
Fax: 209-454-1688
E-Mail: sales@dpstele.com
Web: www.dpstele.com

♦ **DTC Communications**
77 Northeastern Blvd
Nashua NH 03062-3128
603-880-4411; 800-233-8639
Fax: 603-880-6965
E-Mail: bdrowns@ltdccom.com
Web: www.dtc.com

Ducat Industries
PO Box 5185
Appleton WI 54913-5185
414-729-1267

DuPont Building
PO Drawer AE
Cameron LA 70631-2027
318-775-5928
Fax: 318-775-5268

Duracell
Berkshire Industrial Park
Bethel CT 06801
203-791-3274; 800-431-2656
Fax: 203-791-3273
Web: www.duracellnpt.com

♦ **DuraComm**
203 W 23rd Ave
N Kansas City MO 64116
816-472-5544; 800-467-6741
Fax: 816-472-0959
E-Mail: duracomm.com
Web: www.duracomm.com

DW Electrochemicals
97 Newkirk Rd N Ste 3
L4C 3G4 Richmond Hill Canada
905-508-7500
Fax: 905-508-7502
E-Mail: dwel@stabilant.com
Web: www.stabilant.com

DX Radio Systems
3370 San Fernando Rd Ste 206
Los Angeles CA 90065-1437
213-257-0800; 800-447-6937
Fax: 213-254-3210
E-Mail: electronic@compuserve.com
Web: www.tpl-dxrs.com

Dynamic Communications
8625 Cascade Blvd Ste 603
Beaverton OR 97008
503-646-5300
Fax: 503-641-6012
E-Mail: dyncom@lx.netcom.com

Dynatek Communication Dist
1390 Industrial Hwy
South Hampton PA 18966-4013
215-396-7979; 800-662-1411
Fax: 215-396-7999

Addison IL 60101-0571
630-530-8393; 800-530-5064
Fax: 630-530-5019
E-Mail: sales@etipinc.com
Web: www.etipinc.com

♦ **E A G L E**
PO Box 4010
Sedona AZ 86340-4010
520-204-2597
Fax: 520-204-2568
E-Mail: eag@sedona.net

Eagle Eye Technologies
PO Box 11548
Wichita KS 67202-0548
316-263-1917; 800-779-1917
Fax: 316-263-1967

Eagle Tech
625 W Airwood Dr
East Alton IL 62024-1858
618-462-3245
Fax: 618-258-7044

Eagle Wireless International
910 Gemini
Houston TX 77058-2704
281-280-0488; 800-628-3910
Fax: 281-280-0381
E-Mail: sales@eglw.com
Web: www.eglw.com

♦ **Earmark**
1125 Dixwell Ave
Hamden CT 06514-4735
203-777-2130; 888-EARMARK
Fax: 203-777-2886
E-Mail: earmark@tiac.net
Web: http://www.earmark.com

Easi-Set Industries
PO Box 300
Midland VA 22728-0300
800-547-4045
Fax: 540-439-1232
E-Mail: easiset@mnsinc.com
Web: www.easi-set.com

Eastcom Industries
90 Wings Rd Ste 8
L4L 6A9 Woodbridge ON Canada
905-850-2500; 800-263-2323
Fax: 800-265-0951

Eaton Trucking Info Serv Div
6209 Ramada Dr
Clemmons NC 27012-9216
910-712-2100
Fax: 910-712-2067

EDX Engineering
PO Box 1547
Eugene OR 97440-1547
541-345-0019
Fax: 541-345-8145
E-Mail: info@edx.com
Web: www.edx.com

EIP Microwave
1745 McCandless Dr
Milpitas CA 95035-8024
408-945-1477; 800-232-EIP1
Fax: 408-945-0977
Web: www.eip.com

Electro Dynamics Crystal
9075 Cody
Overland Park KS 66214-1731
913-888-1750; 800-332-9825
Fax: 913-888-1260

ElectroCom Communication Systems
10400 Pioneer Blvd
Santa Fe Springs CA 90670-3728
562-946-9493; 800-348-1477
Fax: 562-946-7483
E-Mail: bandp@ecomsys.com
Web: www.ecomsys.com

Electro-Comm Dist
4950 Oakland St

Spectrum - A New Dimension In Repeaters

TRUNKED or CONVENTIONAL

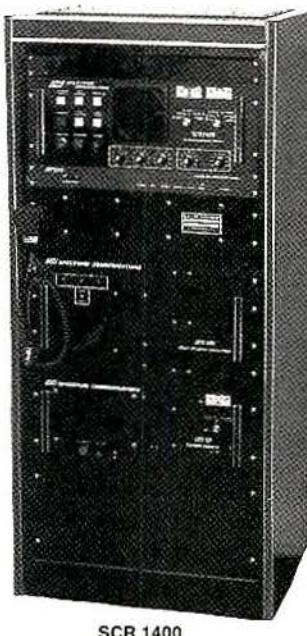
Spectrum Repeaters & Base Stations provide a New Dimension in 'on the air' performance that lasts - year after year, even under the worst conditions. Thousands of our units have been operating all over the world for over 23 years...with excellent reports.

OUR REPEATERS CAN EASILY BE TRUNKED, USING YOUR CONTROLLER PLUGGED INTO THE REAR JACK, OR USED CONVENTIONALLY.

- Deluxe Models with Full Panel Metering & Controls
- Low Cost Basic Units
- Super Sensitive & Selective Receivers
- Excellent Quality Audio
- 100% Duty Cycle
- Provision for: Interconnect, DTMF Remote Control, Tone Panel, etc.
- Also Available: Duplexers, Cabinets, Antennas, etc.



S-7R
Low Cost
Repeater



SCR 1400
150W Rptr/Base

VHF/UHF
10-150
Watts

1055 W. Germantown Pk., Norristown, PA 19403 • (610) 631-1710 (800) 220-1710 FAX: (610) 631-5017

Circle (79) on Fast Fact Card

Denver CO 80239-2720
303-371-8182; 800-525-0173
Fax: 303-371-8158
E-Mail: sales@electro-comm.com
Web: www.electro-comm.com

Electronic Products
530 Hartbrook Dr PO Box 167
Hartland WI 53029-0167
414-367-2929; 800-825-2505
Fax: 414-367-2534
E-Mail: info@electpdc.com
Web: www.electpdc.com

Electronics Center
3921 Broadus Ave
El Paso TX 79904-5503
915-562-1000
Fax: 915-562-3827
E-Mail: electr3921@aol.com
Web: www.electr.com

Elenco Electronics
150 W Carpenter Ave
Wheeling IL 60090-6062
847-541-3800; 800-533-2441
Fax: 847-520-0085
E-Mail: elenco@elenco.com
Web: www.elenco.com

EmergiTech
6434 E Main St
Reynoldsburg OH 43068-7300
614-866-6712
Fax: 614-866-9208

**Emerson & Cuming
Microwave Products**
28 York Ave
Randolph MA 02368
781-961-9600; 800-650-5740
Fax: 781-961-2845
E-Mail:
jgear@emersoncummingmp.com
Web: www.emersoncummingmp.com

EMF-EMI Control
PO Box D
Gainesville VA 20156
540-347-0030
Fax: 540-347-5813
E-Mail: emfemi@crosslink.net
Web: www.emf-emi.com

EMR
22402 N 19 Ave
Phoenix AZ 85027-2104
602-581-2875; 800-796-2875
Fax: 602-582-9499
E-Mail: info@emrcorp.com
Web: www.emrcorp.com

Engineered Endeavors
7610 Jenthal Dr
Mentor OH 44060-4872
440-918-1101
Fax: 440-918-1108
E-Mail: info@engend.com
Web: www.engend.com

Enviro-Buildings
325 Payson Ave
Quincy IL 62301-4849
217-222-5453; 800-728-5454
Fax: 217-228-2424
E-Mail: admin@envirobuildings.com
Web: www.envirobuildings.com

Environmental Technology
1302 High St
South Bend IN 46601-3709
219-233-1202; 800-234-4239
Fax: 219-233-2152
E-Mail: tscott@networketi.com
Web: www.networketi.com

EPCOM
1630 E Paisano Dr
El Paso TX 79901-3134
915-533-5119; 888-533-5119
Fax: 915-533-5183
E-Mail: epcm@whc.net

EPS Wireless
3801 Realty Rd
Dallas TX 75244-2214
214-242-1887; 800-999-1377
Fax: 214-245-0793
Web: www.epswireless.com

Equipto Electronics
351 Woodlawn Ave
Aurora IL 60506-5575
630-897-4691
Fax: 630-897-5314

ERA
44 N Michigan Ave Ste 1960
Chicago IL 60611
312-527-3050; 800-776-7377
Fax: 312-527-3286
E-Mail: info@era.org
Web: www.era.org

ERI-Electronics Research
7777 Gardner Rd
Chandler IN 47610-9219
812-925-6000
Fax: 812-925-4030
Web: www.eriinc.com

Erico
34600 Solon Rd
Solon OH 44139-2696
800-248-9353

Ericsson
Mountain View Rd
Lynchburg VA 24502-2215
804-528-7000
Fax: 804-528-7489
Web: www.exu.ericsson.se/

Ericsson Messaging Systems
145 Crossways Park Dr W

Woodbury NY 11797-2049
516-677-1000; 800-828-8255
Fax: 516-677-1111

ESA Telecommunications
PO Box 457 10345 S Oxford
Chicago Ridge IL 60415-0457
708-423-3414
Fax: 708-423-3406

Escotel Software
1 Lois St
Norwalk CT 06851-4432
203-849-3330; 800-372-6835
Fax: 203-849-9525

ESI Cases & Accessories
15 Bond St
Brooklyn NY 11201-5805
718-858-1514
Fax: 718-237-1541

FREEDOM OF CHOICE

As your two-way radio communications needs change, the specific accessories required for the job may vary as well. This used to mean purchasing a whole new set of accessories for each two-way radio system.

But OTTO Communications has changed the rules.

OTTO believes in taking a modular approach towards solving specific situations. If a standard earphone, eartip or connector doesn't meet your needs, we have a wide variety of alternative parts from which to choose...or we will find a customized solution. We provide a new way of upgrading your system without the cost of buying a brand-new set.

OTTO Communications also manufactures:

Noise-attenuating headsets with certified NRR of 24dB, lightweight headsets or remote speaker microphones, low-profile earphone kits and much more. Contact us today by phone, fax or E-mail, or come visit our website.

Your Specialists In Two-Way Radio Accessories

OTTO
COMMUNICATIONS



2 East Main Street • Carpentersville, IL 60110
Toll-free: 888-234-OTTO • Phone: 847-428-7171 • Fax: 847-428-1956
E-Mail: comsales@ottoeng.com • Internet: www.ottoeng.com

ETrunk Systems
1500 Front St
Yorktown Heights NY 10598-4638
814-245-1128; 800-292-9723
Fax: 914-245-2382

Evans Consoles
1930 Maynard Rd SE
T2E 6JB Calgary AB Canada
403-291-4444
Fax: 403-250-6549
E-Mail: info@econsole.com
Web: www.econsole.com

♦ **Event Rental Communication**
2422 SE Hawthorne
Portland OR 97214-3925
503-232-9031; 800-283-COMM
Fax: 503-232-7384
E-Mail: eventcomm@aol.com

Eventide
One Aisan Way
Little Ferry NJ 07643-2227
201-641-1200
Fax: 201-641-1640
E-Mail: loggers@eventide.com
Web: www.eventide.com

Everon America
3137 Irving Blvd #323
Dallas TX 75247-2501
214-267-8181; 800-603-3766
Fax: 214-267-8188
E-Mail: everon@everon.com
everon@mpsi.net
Web: www.everon.com

ExCellular Communications
PO Box 7328
Orange CA 92863-7328
714-289-5100; 800-762-4300
Fax: 714-744-2524
E-Mail: vickers@excelluar.com
Web: www.excelluar.com

Express Tower
PO Box 143
Big Cabin OK 74332-0143
918-783-5129
Fax: 918-783-5590

**EZ Soft Business Software/
EZ Pager**
PO Box 811828
Boca Raton FL 33481-1828
561-997-9003

F

Falcon Direct
#36 - 20th Ave NW
Birmingham AL 35215-4507
205-854-2611; 800-489-2611
Fax: 205-853-6178
E-Mail: jmerone@aol.com
Web: www.falcondirect.com

Fanon Courier
14811 Myford Rd
Tustin CA 92780-7227
714-669-9890; 800-345-1354
Fax: 714-669-1081

Federal Signal
2645 Federal Signal Dr
University Park IL 60466-3195
708-534-3400
Fax: 708-534-4727

Fibrebond Resources
PO Box 5001
Minden LA 71058-5001
318-377-1030; 800-824-2614
Fax: 318-377-5756
E-Mail: sales@fibrebond.com
Web: www.fibrebond.com

Filtroneics
6010 Parretta Dr

Kansas City MO 64120-2156
816-231-7375
Fax: 816-241-0368
E-Mail: filtro@aol.com

First Search
6584 N Northwest Hwy
Chicago IL 60631-1415
773-774-0001
Fax: 773-774-5571
E-Mail: fshunter@aol.com
Web: www.firstsearch.com

Flash Technology of America
PO Box 1549
Brentwood TN 37024-1549
615-377-0600
Fax: 615-377-2383

Fleet Safety Equipment
3090 Wifong Rd
Memphis TN 38134
901-384-7777; 800-847-8762
Fax: 901-377-5633

Flexco Microwave Inv
101 Bilby Rd Ste E
Hackettstown NJ 07840-1715
908-850-5800; 800-84-FLEXCO
Fax: 908-850-5250
E-Mail: mptoe.flexco@worldnet.att.net
Web: www.flexcomw.com

Florida RF Labs
8851 SW Old Kansas Ave
Stuart FL 34997-7204

Fluke
PO Box 9090
Everett WA 98206-9090
206-347-6100; 800-44-FLUKE
Fax: 206-356-5116

Forest Industries
Telecommunications
871 Country Club Rd Ste A
Eugene OR 97401-2200
541-485-8441
Fax: 541-485-7556
E-Mail: license@landmobile.com
Web: www.landmobile.com

Fourth Dimension Industry
331G Dante Court
Holbrook NY 11741-3800
516-467-1220; 800-378-0348
Fax: 516-467-1645

Frank Thatcher Assoc
564 Market St Ste 612
San Francisco CA 94104-5414
415-956-6118
Fax: 415-956-3228

Freeman Engineering
3131 N I-10 Service Rd
Metairie LA 70002-6050
504-439-5200
Fax: 504-439-5212

Fred A Nudd
1743 Rt 104 Box 577
Ontario NY 14519
315-524-2531
Fax: 315-524-4249
Web: www.nuddtowers.com

♦ **Frederick G Griffin PC**
3229 Waterlick Rd
Lynchburg VA 24502-3635
804-237-2044
Fax: 804-237-6063

Frequency Management
15302 Bolsa Chica St
Huntington Beach CA 92649-1245
714-892-3234; 800-9825 (XTAL)
Fax: 714-890-1832
E-Mail: jjustus@frequencymanagement.com
Web: www.frequencymanagement.com

Fryer's Site Guide
84 N Lansdowne Ave Ste 300
Lansdowne PA 19050
610-284-9289
Fax: 610-622-1697
E-Mail: jim@fryersguide.com
Web: www.fryersguide.com

Futurecom Systems Group
110 Snow Blvd Units 3-4
L4K 4B8 Concord Canada
905-660-5548; 800-701-9180
Fax: 905-660-6858
E-Mail: allanp@futurecom.com
Web: www.futurecom.com

FWT
1901 E Loop 820 S
Fort Worth TX 76112-7899
817-457-3060; 800-433-1816
Fax: 817-429-6010

G

Gabriel Electronics
PO Box 70/Dept MRT-BG
Scarborough ME 04070-0070
207-883-5161
Fax: 207-883-4469

♦ **Gai-Tronics**
(Instrument Associates)
Mohnton PA 19540
901-947-4000; 888-254-9155
Fax: 901-948-8855
E-Mail: iainfo@gai-tronicslmr.com
Web: www.gai-tronicslmr.com

Gamber-Johnson
3001 Borham Ave
Stevens Point WI 54481-5062
715-344-3482; 800-456-6868
Fax: 715-344-5209
E-Mail: gamberj@gamberjohnson.com
Web: www.gamberjohnson.com

GEC Plessey Semiconductors
1500 Greenhills Rd
Scotts Valley CA 95066-4922
408-439-6047
Fax: 408-438-5576

Gemini Industries
215 Entin Rd
Clifton NJ 07014-1424
973-471-9050; 800-526-7452
Fax: 973-574-7225

Genave/NRC
1120 220th St W Hwy 50
Farmington MN 55024-9734
612-460-6616; 800-236-0049
Fax: 612-460-6686
E-Mail: support@genave.com
Web: www.genave.com

Gencron Engineering
PO Box 910225
San Diego CA 92191-0225
800-556-8866
Fax: 619-792-6688
E-Mail: jgaugra

Generac
PO Box 8 Hwy 59 & Hillside Rd
Waukesha WI 53187-0008
414-544-4811
Fax: 414-544-0770
E-Mail: jstangler@globalsdialog

General Communications
5157 Anton Dr
Madison WI 53719-1784
608-271-4848; 800-356-3200
Fax: 608-274-2080
E-Mail: sales@gencomm.com
Web: www.gencomm.com

♦ **The Genesis Group**
PO Box 132119
Tyler TX 75713-2119
903-561-6673
Fax: 903-561-6228
E-Mail: genesis@genesisworld.com
Web: www.genesisworld.com/

**Geospatial Information
& Technology Association**
14456 E Evans Ave
Aurora CO 80014-1409
303-337-0513
Fax: 303-337-1001
E-Mail: staff@gita.org
Web: www.gita.org

GLB Electronics
151 North America Dr
Buffalo NY 14224-2258
905-878-7794
Fax: 905-878-2544
E-Mail: info@glb.com
Web: www.glb.com

Glenayre Electronics
5935 Carnegie Blvd
Charlotte NC 28209-4635
704-553-0038
Fax: 704-553-0524
Web: www.glenayre.com

Global Access Pagers
540 Opper Rd
Escondido CA 92029-1018

Global Dispatch Technology
120 E Sheridan Ste G100
Oklahoma City OK 73104-2414
415-810-8008
Fax: 405-810-8018
Web: www.global-dispatch.com

**Global Wireless Communication
Products**
601 Elkcam Cr #A2
Marco Island FL 34145-5981
941-642-2083; 800-220-5174
Fax: 941-642-9283

GMSI
275 Michael Cowpland
Kanata, Ontario Canada
619-599-5161

**GoComm Wireless
(formerly Pagerola)**
1544 Sawdust Rd Ste 303
The Woodlands TX 77380
281-298-2029; 800-873-0952
Fax: 281-298-2863
E-Mail: gocomm@gocomm.com
Web: www.gocomm.com

Government Institutes
4 Research Pl Ste 2000
Rockville MD 20850-3226
301-921-2323
Fax: 301-921-0264
E-Mail: ginfo@govinst.com
Web: www.govinst.com

GP Batteries USA
11235 W Bernardo Court
San Diego CA 92127-1638
619-674-5620; 800-237-6937
Fax: 619-674-7237
E-Mail: gpusa@gpbatteries.com
Web: www.gpbatteries.com

E Gracey Electronics
PO Box 6000
Reno NV 89513-6000
702-324-3290
Fax: 702-324-3289
E-Mail: gracey@eg.reno.nv.us

Granger Telecom
743 N Pastoria Ave
Sunnyvale CA 94086-2918
408-774-9030
Fax: 408-774-9035

Grayhill
561 Hillgrove Ave
La Grange IL 60525-5914
708-482-2162; 800-426-4383
Fax: 708-354-2820
Web: www.grayhill.com
Fax: 216-349-8407

Grayson Wireless
140 Vista Centre Dr
Forest VA 24551-2644
804-386-5300; 800-800-7465
Fax: 804-386-5324
E-Mail: grayson1@inmind.com
Web: www.grayson.com

GRE America
425 Harbor Blvd
Belmont CA 94002-4048
415-591-1400; 800-233-5973
Fax: 415-591-2001
E-Mail: gre@greamerica.com
Web: www.greamerica.com

Gronel Assoc
4408 Magnolia Dr NE
Albuquerque NM 87111-4232
505-237-2560
Fax: 505-237-2561

H

HaddCOMM International
PO Box 2038
Tulsa OK 74101-2038
918-582-5500; 800-364-6688
Fax: 918-585-9610
Web: www.haddcomm.com

Haewa Communications
4357-B Park Dr
Norcross GA 30093-2967
770-921-3272; 800-783-4239
Fax: 770-921-2896
E-Mail: haewa@bellsouth.net

Hamtronics
65 Moul Rd
Hilton NY 14468-9535
716-392-9430
Fax: 716-392-9420
E-Mail: jv@hamtronics.com
Web: www.hamtronics.com

Harger Lightning Protection
301 Ziegler Dr
Grayslake IL 60030-1664
847-548-8700; 800-842-7437
Fax: 847-548-8755
E-Mail: hargersales@harger.com
Web: www.harger.com

♦ **Hark Systems**
768 Travelers Blvd
Summerville SC 29485-8223
843-875-4480; 800-367-4275
Fax: 843-873-5277
E-Mail: mel@harksystems.com
Web: www.harksystems.com

Harris Canada Wireless Access
6732 8th St. NE
T2E 8M4 Calgary Alberta Canada
403-295-5000
Fax: 403-295-5020
E-Mail: hwasales@harris.com

Harris Farinon Div
330 Twin Dolphin Dr
Redwood Shores CA 94065-1421
650-594-3644; 800-FARINON
Fax: 650-594-3742
Web: www.farinon.harris.com

♦ **Harris RF Communications Div**
1680 University Ave
Rochester NY 14610-1839
716-244-5830

HarTech
PO Box 88
Littleton CO 80160-0088
303-795-2813
Fax: 303-347-2652
E-Mail: jhart@du.edu
Web: www.rfyellow/hartech

Hartford Concrete Products
PO Box 660
Hartford City IN 47348-0660
765-348-3506; 800-428-8110
Fax: 765-348-3121

Havis Shields Equipment
395 Jacksonville Rd PO Box 2099
Warminster PA 18974-4825
215-957-0720; 800-524-9900
Fax: 215-957-0729

Hawker Energy Products
617 N Ridgeview Dr
Warrensburg MO 64093-9301
660-429-6437; 800-964-2837
Fax: 660-429-6397
E-Mail: info@hepi.com
Web: www.hepi.com

Hayes Seay Mattern & Mattern
1315 Franklin Rd SW
Roanoke VA 24016-4607
540-857-3100
Fax: 540-857-3180
E-Mail: hsmm@roanoke.infi.net
Web: www.hsmm.com

Hazeltine
450 E Pulaski Rd
Greenlawn NY 11740-1606
516-282-8499
Fax: 516-262-8400
E-Mail: anderson@hazeltine.com
Web: www.hazeltine.com

♦ **Helper Instruments**
131 Tomahawk Dr
Indian Harbour
Beach FL 32937-3542
407-777-1440; 800-327-9308
Fax: 407-777-1447

Hendry Telephone Products
PO Box 998
Goleta CA 93116-0998
805-968-5511
Fax: 805-968-5561
E-Mail: mailbox@hendry.com
Web: www.hendry.com

Henry Radio
2050 S Bundy Dr
Los Angeles CA 90025-6123
213-820-1234; 800-877-7979
Fax: 213-826-7790

♦ **Hewlett-Packard**
E 24001 Mission
Liberty Lake WA 99019-9599
509-921-3331
Web: www.hp.com

Hill Radio Communications
PO Box 1405
Bloomington IL 61702-1405
309-663-2141
Fax: 309-662-4796

Hite Electronic Sales
7990 Dick Price Rd
Mansfield TX 76063-5229
817-483-7077; 800-925-4483
Fax: 817-483-6193
E-Mail: hitesel@flash.net

Hitech Systems
1964 Westwood Blvd Ste 435
Los Angeles CA 90025-4651
310-475-3210; 800-733-3210

Fax: 310-474-0655
E-Mail: info@hitech.com
Web: www.hitech.com

HMC-Hub Material Company
33 Springdale Ave
Canton MA 02021-3200
781-821-1870
Fax: 781-821-4133
E-Mail: sales@hubmaterial.com
Web: www.hubmaterial.com

Holiday Industries
14825 Martin Dr
Eden Prairie MN 55344-2076
612-934-4920
Fax: 612-964-3604

Houston & Assoc (Agency)
12245 E 14th Ave Ste 309
Aurora CO 80011-5539
303-360-7780
Fax: 303-360-0411

HTE Public Safety
390 N Orange Ave Ste 2000
Orlando FL 32801-1642
800-727-8088

♦ **Huber & Suhner**
19 Thompson Dr
Essex VT 05452-3408
802-878-0555
Fax: 802-878-9880
E-Mail: info@hubersuhnerinc.com
Web: www.hubersuhnerinc.com

Hughey & Phillips
PO Box 2167
Simi Valley CA 93062-2167
805-581-5591
Fax: 805-581-5032
E-Mail: hp2162@aol.com

New! **\$986.00**
The Universal Encoder-1000
a complete pager test encoder

The UE-1000 features...

Analog Formats

- ♦ Mot Two Tone
- ♦ Prog2Tone
- ♦ 5/6TONE
- ♦ CTCSS
- ♦ DTMF
- ♦ REACH

Digital Formats:

- ♦ POCSAG
- ♦ GOLAY
- ♦ FLEX-2™
- ♦ FLEX-4™

- ♦ Single button format selection
- ♦ Continuous Page Output for level adjustments
- ♦ No need to memorize code plans

To Order:



HELPER
INSTRUMENTS
COMPANY

Call 1-800-327-9308

131 TOMAHAWK DRIVE • INDIAN HARBOUR BEACH, FLORIDA 32937 • USA
(407) 777-1440 • (800) 327-9308 • FAX (407) 777-1447

Circle (57) on Fast Fact Card

Hulse Enterprises
15905 W 4B Rd
Plymouth IN 46563-9723
219-936-7211
Fax: 219-936-2692

♦ Hutton Communications
2520 Marsh Ln
Carrollton TX 75006
972-239-0580; 800-442-3811
Fax: 972-239-5264

Hy-Q International
1438 Cox Ave
Erlanger KY 41018-1094
606-283-5000
Fax: 606-283-0883
E-Mail: sales@hyqusa.com
Web: www.hyqusa.com

IBM Wireless
700 Park Office Dr Bldg 662
Dept DKMA
Research Triangle Pa NC 27709
800-426-2968
Fax: 919-543-7378

♦ ICOM America
2380 116th Ave NE
Bellevue WA 98004-3036
425-454-8155
Fax: 425-450-6080
Web: www.icomamerica.com

♦ ICT
#402 9775 188th St

V3S 6S2 Surrey Canada
604-888-6304
Fax: 604-888-3650

ICT Systems
1013 N Lane
Wichita KS 67203
316-263-1917
Fax: 316-264-9358

♦ IDA
1345 Main Ave
Fargo ND 58103-1631
701-280-1122; 800-627-4432
Fax: 218-233-1886
E-Mail: sales@idaco.com
Web: www.idaco.com

IEEE Press
445 Hoes Lane, PO Box 1331
Piscataway NJ 08854-4141

♦ IFR Americas
10200 W York
Wichita KS 67215-8999
316-522-4981; 800-835-2352
Fax: 316-522-1360
E-Mail: sales@ifrsys.com
Web: www.ifrinternational.com

Illinois Superconductor
451 Kingston Court
Mt Prospect IL 60056-6070
847-391-9400
Fax: 847-299-9609
E-Mail: filters@ilsc.com

Ilumicell
2121 Walter Glaub Dr
Plymouth IN 46563-3428
219-936-7730
Fax: 219-936-2692

Imark Communications Pty
Unit 2 75 Mark St
3051 N Melbourne Australia
+61 3 93295433
Fax: +61 3 93284431
E-Mail: sales@imark.com.au
Web: www.imark.com.au

IMT ComSys
8644 Commerce Ct
V5A 4N6 Burnaby BC Canada
604-294-0040
Fax: 604 294-5506
E-Mail: wolfadmin@imtcomsys.bc.ca
Web: www.imtcomsys.bc.ca

Independent Technologies
11422 Miracle Hills Dr Ste 500
Omaha NE 68154-4420
402-496-4700
Fax: 402-493-5100

Index Publishing Group
3368 Governor Dr Ste 273F
San Diego CA 92122-2936
619-455-6100; 800-546-6707
Fax: 619-552-9050
E-Mail:
indexbooks@indexbooks.com
Web: www.electrici.com/~ipgbooks

Indyme
9085 Aero Dr
San Diego CA 92123-2312
619-268-0717; 800-871-0717
Fax: 619-268-5178

Information Radio Technology
635 E 185 St
Cleveland OH 44119-1764
216-531-1313; 800-228-8998
Fax: 216-531-8383
E-Mail:
7477.3622@compuserve.com
Forum GO_INFORAD
Web: www.inforad.com

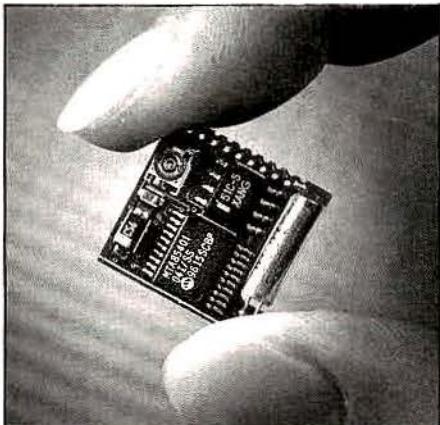
Inmetco
245 Portersville Rd
Ellwood City PA 16117-2431
412-758-2802
Fax: 412-758-2845

Innovation
22214 20th Ave SE
Bothell WA 98021-8490
206-806-9200
Fax: 206-806-9292

Institute for Disabilities Research
and Training
2424 University Blvd W
Silver Spring MD 20902
301-942-4326
Fax: 301-593-9670

Institute for Professional
Advancement
PO Box 248
Geneva IL 60134-0248
630-208-1466
Fax: 630-208-1475

Digital ANI: Compatible with Motorola® MDC-1200®



Micro-Miniature ID-12

Manufactured by Control Signal®, the ID-12 ANI encoder is a cost-effective way to upgrade all the radios in your fleet with ANI that is compatible with Motorola MDC-1200. Works in all radios, and its tiny size (.59" x .65" x .12") allows it to fit in virtually all hand-helds. Has leading and trailing IDs, emergency, and time-out timer. Fleet price (100 qty) \$89 ea.

Call 800-521-2203

CSC **CONTROL SIGNAL**

1985 S. Depew, #7, Denver, CO 80227
(303) 989-8000 FAX 303-989-8003

Circle (58) on Fast Fact Card

WACOM

QUALITY*SERVICE*PRICE

...WE DO IT BETTER!

FOR THE 150, 450, & 850 MHZ BANDS

- Low-loss Transmitter Combiners
- Receiver Multicoupler Systems
- Coaxial Cavity Filters
- Duplexers

Investigate this complete line of
high performance products today!

PHONE 254-848-4435
FAX 254-848-4209

WACOM
PRODUCTS, INC.
P.O. BOX 21145 ★ WACO, TEXAS 76702



Circle (59) on Fast Fact Card

♦ **Instrument Associates**
2455 Harbor Ave
Memphis TN 38113
901-948-1490

Insul-Tab
50 Evergreen Rd
Woburn MA 01801-1019
617-935-0800
Fax: 617-935-0879

Integra Software
750 Executive Center Dr
Greenville SC 29615-4521
864-627-5000
Fax: 864-288-7770

Integrated Computer Concepts
3250 N Arlington Heights Rd
Arlington Heights IL 60004-1563
847-392-3300; 800-837-2468
Fax: 847-392-1193

Intek Global
(Formerly Midland Land Mobile
Radio)
1690 N Topping Ave
Kansas City MO 64120-1224
816-241-8400; 800-669-4567
Fax: 816-920-1144

Intelligent Technologies
9454 Waples St
San Diego CA 92121
619-458-1500 X2102; 800-233-6868
Fax: 619-458-1798
E-Mail: iramsey@itecheng.com
Web: www.itecheng.com

Intellisoft
6330 Manor Lane Ste 103
Miami FL 33143-4961
305-669-4110
Fax: 305-669-9868

Interactive Systems
1601 N Kent St Ste 1103
Arlington VA 22209-2105
703-812-8270
Fax: 703-812-8275

Intercontinental Marketing
35 E Wacker Dr 28th Fl
Chicago IL 60601
312-372-3310
Fax: 312-372-3810
E-Mail: kellyrr@msn.com

**International Mobile
Telecommunications
Association**
1150 18th St NW Ste 250
Washington DC 20036
202-331-7773
Fax: 202-331-9062
E-Mail: online@imta.org
Web: www.imta.org

♦ **Intrafamily Communications**
106 Cold Spring Rd
Freehold NJ 07728-3058
908-462-5964
Fax: 908-308-4633

Intraplex
59 Porter Rd
Littleton MA 01460-1410
978-486-9000; 877-INTRAPLEX
Fax: 978-486-0660
E-Mail: sales@intraplex.com
Web: www.intraplex.com

Inwave
29 W Milwaukee St Ste 201
Janesville WI 53545-2911
608-752-8181; 800-304-1000
Fax: 608-752-8981
Web: www.inwave.com

ITA Clearinghouse Div
1110 N Glebe Rd Ste 500
Arlington VA 22201-4795
703-528-5115
Fax: 703-524-1074
E-Mail: info@ita-relay.com
Web: www.ita-relay.com

Need Remotes?



Call us.



DC Remotes
DC Termination Panels
Tone Remotes
Tone Termination Panels
Local Extensions
Multi-Channel Remotes



941 Hensley Lane • Wylie, TX 75098
Voice (800) 869-9128 • Fax (888) 437-5360

Circle (60) on Fast Fact Card

Dealers Wanted

TelePath
is an authorized
distributor for the . . .



MOTOROLA



TS10 Portable

In Stock Now
Available for Immediate Delivery

Dealers

The TS10 Portable is a Full Margin Product

Call Today

1-800-292-1700

1-510-656-5600

Authorized Motorola Distributor



TelePath

Commercial Communication Equipment

49111 Milmont Dr. • Fremont, CA 94538 • www.telepathcorp.com

Circle (61) on Fast Fact Card

Ittron
2818 N Sullivan Rd
Spokane WA 99216-1897
509-924-9900; 800-635-5461
Fax: 509-891-3313
Web: www.itron.com

ITV
470 Champions View Dr
Alpharetta GA 30004
770-751-1194
Fax: 770-664-0132
Web: www.ejdot.com

IWL Communications
4311 FM 2351 PO Box 1324
Friendswood TX 77546-2406
800-776-7243
Fax: 713-482-9144

J

Jack Daniel
PO Box 1544
Cucamonga CA 91729-1544
909-980-3244; 800-NON-TOLL
Fax: 909-980-5226
Web: www.rfsolutions.com

Jackson Telecom
5732 Evening Wy
Santa Rosa CA 95409
707-539-0442; 800-492-0489
Fax: 707-539-0412
E-Mail:
jackson_telcom@compuserve.com

Jan Communications & Electronics
6630 S Crescent Blvd
Pennsauken NJ 08109-1403
609-663-4800; 800-444-7233
Fax: 609-663-5377

JB Communications
PO Box 354
Watseka IL 60970-0354
815-432-6177; 800-331-5161
Fax: 815-432-6185
E-Mail: tkofjbc@aol.com

♦ **JBro Batteries**
1938 University Ln
Lisle IL 60532-2150
630-964-9358; 800-323-3779
Fax: 630-964-9081
E-Mail: jbrott@jbro.com
Web: www.jbro.com

♦ **JEI Communications Recording System**
3087 Alhambra Dr
Cameron Park CA 95682-8849

530-677-3210
Fax: 530-677-4714
E-Mail: jei@directcon.net
Web: www.jei-inc.com

Jensen Tools
7815 S 46th St
Phoenix AZ 85044-5399
602-968-6231; 800-426-1194
Fax: 602-438-1690
E-Mail: jensen@stanleyworks.com
Web: www.jensen-tools.com

JFW Industries
5134 Commerce Square Dr
Indianapolis IN 46237-9705
317-887-1340
Fax: 317-881-6790
E-Mail: sales@jfwindustries.com
Web: www.jfwindustries.com

John J Davis & Associates
PO Box 128
Sierra Madre CA 91025-0128
626-355-6909
Fax: 626-355-4890
E-Mail: jjdavis@compuserve.com

John Mitchell
801 W Williamson Ave
Fullerton CA 92832-2133
714-773-4032
Fax: 714-773-0479
E-Mail: nmitchell@radiopac.com

Jon/Beau
PO Box 335
Weymouth MA 02188-0002
781-335-0372
Fax: 781-337-7228
E-Mail: Jon-beau@estols.com

Joslyn Electronics Systems
6868 Cortona Dr
Goleta CA 93116-0817
805-968-3551; 800-752-8068
Fax: 805-968-2335
E-Mail: joslyn@jesc.com
Web: www.joslynelectronic.com

Jotto Desk
115 E Linden
Rogers AR 72756-6035
501-636-5776; 800-548-3373
Fax: 501-636-3245
E-Mail:
stuart@assembledproducts.com
Web: www.jottodesk.com

♦ **JPS Communications**
PO Box 97757 (5720M Capital Blvd)
Raleigh NC 27624-7757
919-790-1011
Fax: 919-790-1456
E-Mail: jps@jps.com
Web: www.jps.com

JTech
6413 Congress Ave Ste 150
Boca Raton FL 33487-2840
800-321-6221

Juno Online Services LP
120 W 45th St 15th Fl
New York NY 10036
212-597-9000; 800-654-JUNO
Fax: 212-597-9200
E-Mail: info@juno.com
Web: www.juno.com

K

K-W Mfg
PO Box 508
Prague OK 74864-0508
405-567-2284
Fax: 405-567-4153

Kachina Communications
PO Box 1949
Cottonwood AZ 86326-1949
520-634-7828
Fax: 520-634-8053
E-Mail: sales@kachina-az.com
Web: www.kachina-az.com

Kantronics
1202 E 23rd St
Lawrence KS 66046-5099
913-842-7745; 800-634-3308

Kaval Telecom
161 Alden Rd
L3R 3W7 Markham ON Canada
905-940-1400
Fax: 905-940-1402
E-Mail: kaval@aracnet.net
Web: www.cnet.net/~kaval/index.htm

KAVIcomm
100 Alexis Nihon Ste 410
H4M 2N9 St Laurent QU Canada
514-747-7180
Fax: 514-747-0836
E-Mail: info@kavicom.com
Web: www.kavicom.com

♦ **Kenwood Communications**
PO Box 22745
Long Beach CA 90801-5745
310-639-4200; 800-950-5005
Fax: 310-761-8246
Web: www.kenwood.net

Kenwood Systems Group
4317A FM 2351
Friendswood TX 77546-2406
281-996-4780; 800-TRUNKING
Fax: 281-648-9009
Web: www.kenwood.net

Keyware Technologies
500 W Cummings Park Ste 3600
Woburn MA 01801
781-933-1311
Fax: 781-933-1554
E-Mail: aalger@keyware.com
Web: www.keywareusa.com

King Communications USA
5401 Alhambra Dr Ste B
Orlando FL 32808-7081
407-293-1432; 888-KINGUSA
Fax: 407-293-2907
E-Mail: kingorl@aol.com
Web: www.kingusa.com

Kintronic Labs
PO Box 845
Bristol TN 37621-0845
423-878-3141
Fax: 423-878-4224

Kirby Enterprises
4120 Kirby Ave
Cincinnati OH 45223-2223
513-542-3969; 800-819-2904
Fax: 513-542-8870
E-Mail: channel@fuse.net
Web: home.fuse.net/cehinc

Knight Direct
1602 Masters Way
Chadds Ford PA 19317-9720
610-388-1800
Fax: 610-388-1050
E-Mail: info@knightdirect.com
Web: www.knightdirect.com

KNS Electronics
1609 Regatta Ln Ste A
San Jose CA 95112-1116
408-432-8100
Fax: 408-432-8359

KONtek Industries
1200 Dawson Rd
New Madrid MO 63869-1021
573-748-5561 X223
Fax: 573-748-2828

Kreckman
PO Box 27
Cresco PA 18326-0027
717-595-2212
Fax: 717-595-2024
E-Mail: hkreco@ptd.net

Kyocera Industrial Ceramics
8775 Balboa Ave
San Diego CA 92123-1501
619-576-2649
Fax: 619-541-2718
E-Mail: lyle.gibson@kyocera.com
Web: www.kyocera.com

Kyodo West
6 Four Colins Dr
Canonsburg PA 15317-1751
412-746-9119
Fax: 412-746-7152
E-Mail: moreinfo@ptsystems.com
Web: www.kyodo-west.com

Simulcast SOLUTIONS

Audio Frequency Intersite Links Test Sets TX Control

land mobile simulcast overlap clarity

Featuring

GPS Master Oscillator

716.223.4927 TEL
716.223.3255 FAX
www.simulcastsolutions.com

Circle (62) on Fast Fact Card

L

LG Precision
13013 E 166 St
Cerritos CA 90703-2201
562-404-0101
Fax: 562-921-6227
E-Mail: lgpr@pdc.net
Web: www.lgpr.com

L-Tronics
5546 Cathedral Oaks Rd
Santa Barbara CA 93111-1406
805-967-4859

LaMarche Mfg
106 Bradock Dr

Des Plaines IL 60018-1967
847-299-1188
Fax: 847-299-3061
E-Mail: sales@lamarche.mfg.com
Web: www.lamarche.mfg.com

Landmark Tower
100 Covel Ave
Fort Worth TX 76111-5813
817-335-8666; 800-438-6244
Fax: 817-335-2171

Larsen Electronics
3611 NE 112th Ave
Vancouver WA 98682
360-944-7551; 800-426-1656
Fax: 360-944-7556
E-Mail: larsen@larsenantennas.com
Web: www.larsenantennas.com

Larus
1560 Berger Dr
San Jose CA 95112-2703
408-494-1500; 800-999-9946
Fax: 408-494-0735
E-Mail: larus@laruscorp.com
Web: www.laruscorp.com

Latcom
6960 Camino Maquiladora Ste L
San Diego CA 92173-3516
619-661-2500
Fax: 619-661-2505

Lawrence Behr Associates
PO Box 8026
Greenville NC 27835-8026
252-757-0279; 800-522-4464
Fax: 252-752-9155
E-Mail: lbascc@lbagroup.com
Web: www.lbagroup.com

Lawrence Personnel
1000 Valley Forge Cir Ste 110
King of Prussia PA 19406-1111
610-783-5400
Fax: 610-783-6008

LBA Technology
PO Box 8026
Greenville NC 27835-8026
919-757-0279; 800-522-4464
Fax: 919-752-9715
E-Mail: lbatech@lbagroup.com
Web: www.lbagroup.com/technology

LCC International
2300 Clarendon Blvd Ste 800
Arlington VA 22201-3367
703-351-6666
Fax: 703-516-4950

LDV/Lynch Diversified Vehicles
180 Industrial Dr
Burlington WI 53105-2307
414-763-0147; 800-558-5986
Fax: 414-763-0270
E-Mail: ssy@wi.net
Web: www.idlynch.com

Leach Mounce Architects
1885 Knoll Dr
Ventura CA 93003-7348
805-656-3522
Fax: 805-658-1926
E-Mail: imarch@ix.netcom.com

Leads Metal Products
600 E Ohio St
Indianapolis IN 46202-3811
317-631-7200
Fax: 317-631-7200

Lease Acceptance
30955 Northwestern Hwy
Farmington Hills MI 48334-2580

Lease Corporation of America
340 East Big Beaver Rd Ste 560
Troy MI 48083
248-729-0330; 800-800-8098
Fax: 800-736-0218
Web: www.leasecorp.com

Leathersmith
417 Frytown Rd
Myerstown PA 17067-1923
717-933-8084; 800-233-0440
Fax: 717-933-5653
E-Mail: leathersmith@nbn.net

Leavitt Communications
5115 Church St
Skokie IL 60077-1233
847-676-8282; 800-870-3686
Fax: 847-676-8744
E-Mail: info@leavitt.com
Web: www.leavitt.com

LeBlanc Communications
PO Box 3807
(12801 N Ctrl Exp Ste 150)
Dallas TX 75221-0150
214-934-1894; 800-231-2311
Fax: 214-934-1893

Les Wallen USA
19 Aero Dr
Amherst NY 14225-1401
716-634-0634; 800-888-8797
Fax: 716-632-6304
E-Mail: leswallenusa@juno.com
Web: www.radiomart.com

Lett Electronics
3501 NW Hwy 24
Topeka KS 66618
785-234-6721; 800-530-5550
Fax: 785-234-3584
E-Mail: lett@inlandnet.net
Web: www.lettelelectronics.com

LGP
903 N Bowser Ste 150
Richardson TX 75080
972-889-9974
Fax: 972-889-9976
E-Mail: lwhite@lgp-inc.com
Web: www.lgp-inc.com

Liebert
1050 Dearborn Dr
Columbus OH 43085-4709
614-888-0246; 800-877-9222
Fax: 614-841-6022

Lightning Deterrent
PO Box 595
Wilmington IL 60481-0595
815-458-4044; 800-776-7150
Fax: 815-458-3057
E-Mail: lightdet@interaccess.com
Web: www.lightningdeterrent.com

Lightning Eliminators & Consultants
6687 Arapahoe Rd
Boulder CO 80303-1453
303-447-2828
Fax: 303-447-8122
E-Mail: marketing@lightningeliminators.com
Web: www.lightningeliminators.com

Lightning Master
PO Box 6017
Clearwater FL 33758-6017
813-447-6800; 800-749-6800
Fax: 813-461-3177
E-Mail: jdo@lightningmaster.com
Web: www.lightningmaster.com

Lightning Prevention Syst/ WEBTEK
204-B Cross Keys Rd
Berlin NJ 08009-9408
609-767-7209; 888-667-8745
E-Mail: lps@mail snip.net
Web: www.lpsnet.com

Lindgren RF Enclosures
400 High Grove Blvd
Glendale Heights IL 60139-2218
630-307-7200
Fax: 630-307-7571
E-Mail: lrf@interserv.com
Web: www.lindgrenrf.com

MORE LARSEN
INNOVATION...

Are you seeing
SPOTS!



You should be.

Larsen, a leader in wireless communications antennas for over 30 years, introduces

SPOTS! high performance portable antennas... antennas with a difference you can hear!

Hear this...

Not All Portable Antennas Are Created Equal

Portable antennas often endure extreme operating conditions and physical abuse. In addition, actual performance varies greatly depending on antenna type. This makes selecting the right portable antenna a challenge. Larsen **SPOTS!** are designed and built to withstand the most demanding applications and provide superior electrical performance for clear, continuous communications.

Hear this... **Design and Materials Make a Difference**

Larsen utilizes advanced electrical designs, and premium materials to produce **SPOTS!** portable antennas. Copper plated, hard drawn steel and bronze coated steel braid provide superior signal radiation with maximum structural integrity. Each antenna is covered in the toughest OEM specified polyurethane compound for resistance to water, cracking or permanent bending.

For more information on **SPOTS!** portable antennas, or a free copy of the Larsen Portable Antenna SourceBook and Training Guide featuring **SPOTS!**, contact Larsen at 800-426-1656.

SPOTS!... Hear the Difference.

 Larsen®

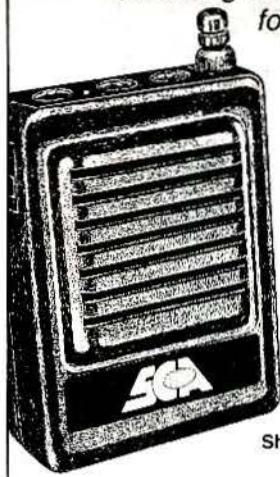
800 426-1656 U.S. 800 663-6734 Canada
www.larsen.com e-mail: larsen@larsen.com

Circle (63) on Fast Fact Card

SCEPTAR

Tone and Voice Pager

Providing Tone and Voice Pagers
for over twenty years



Features:

- Synthesized, PC Programmable
- 2-Channel Operation
- Multi-Address Format
- Channel Monitoring Capability
- Vibrate Option
- Small Size—3-1/8" x 2-7/16" x 3/4"
- Single "AA" Battery
- 2-3 Year Limited Warranty Available



Shinwa Communications of America Inc.
P.O. Box 26407
Oklahoma City, OK 73126

ORDER TOLL FREE: 1-800-627-4722
FAX TOLL FREE 1-800-759-1722

Circle (64) on Fast Fact Card

BE PROTECTED

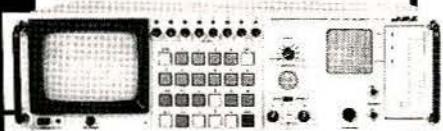
AVOID LEGAL ACTION

DOCUMENT AND VERIFY CRITICAL RADIO & PHONE CONVERSATIONS

AUTOMATIC TIME & DATE IMPRINT

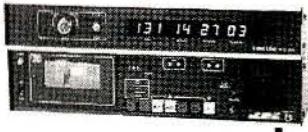
jei COMMUNICATIONS RECORDING SYSTEM

NEW
DIGITAL
SYSTEM



DESK TOP OR RACK MOUNT

3087 Alhambra Drive
Cameron Park, CA 95682
Phone (530) 677-3210
Fax (530) 677-4714
www.jei-inc.com



Circle (65) on Fast Fact Card

Link Communications
1407 4th Ave North
Billings MT 59101-1518
406-245-5002; 800-610-4085
Fax: 406-245-4889
E-Mail: info@link-comm.com
Web: www.link-comm.com

Lyncole XIT Grounding
3547 Voyager St #104
Torrance CA 90503-1673
310-214-4000; 800-962-2610
Fax: 310-214-1114
E-Mail: sales@lyncole.com
Web: www.lyncole.com

Linktronic Systems
10762 Los Vaqueros Cr
Los Alamitos CA 90720-2515
714-952-3683
Fax: 714-952-0107
E-Mail: sales@linktronics.com
Web: www.linktronics.com

Lockheed Martin L-3
Communications Narda
Microwave West
107 Woodmere Rd
Folsom CA 95630
916-638-5500
Fax: 916-638-8682

LOCSYS
2016 E Broadway Blvd
Tucson AZ 85719-5936
520-882-8780
Fax: 520-624-2727
E-Mail: jrowley@locsys.com
Web: www.locsys.com

Lone Peak Designs
3474 S 2300 E
Salt Lake City UT 84109-3069
801-272-5217; 800-777-7679
Fax: 801-272-5240
E-Mail: lppacks@aol.com

Lorain Products
1122 F St
Lorain OH 44052-2293
216-288-1122
Fax: 216-246-4876

♦ Loudoun Communications
585 Factory Shoals Rd
Austell GA 30001-5508
770-948-9566
Fax: 770-948-9996

LPKF Laser & Electronics
6180 SW Arctic Dr
Beaverton OR 97005-9448
503-643-0604; 800-545-LPKF
Fax: 503-643-3662
E-Mail: info@lpkfcadcam.com
Web: www.lpkfcadcam.com

Lucas & Assoc Consortium
of Consultants
17422 Ponderosa Pines
Houston TX 77090-2058
281-580-3492
Fax: 281-583-8408
E-Mail: hank.lucas@worldnet.att.net

Lucent Technologies
67 Whippiany Rd Rm 1A-316
Whippiany NJ 07981
973-386-6750
Fax: 973-386-3459

Lunar Industries
7966 Arjons Dr Ste 102
San Diego CA 92126-6361
619-549-9555; 800-205-8627
Fax: 619-549-2346

Lund Industries
303 Messner Dr
Wheeling IL 60090-6445
847-459-1460; 800-504-1460
Fax: 847-459-1569

Lux Steel Seating
P O Box 2906 2135 Industrial Pky
Elkhart IN 46515-2906
800-334-7426
Fax: 219-294-4043
Web: www.luxcompany.com

Lynn-Arthur Assoc
2350 Green Rd Ste 160
Ann Arbor MI 48105-1572
313-995-5590
Fax: 313-995-5989
Web: www.laa.com

M

M&M Communications
PO Box 416
Youngsville NC 27596-0416
919-556-5999

M-Tron Industries
PO Box 630
Yankton SD 57078-0630
605-665-9321; 800-762-8800
Fax: 605-665-1709

M/A-COM
1011 Pawtucket
Lowell MA 01854-1089
800-366-2266
Fax: 508-776-0765

MACAW Electronics
5115 Avenida Encinas "G"
Carlsbad CA 92008-4387
760-438-2326
Fax: 760-438-2356/3532
E-Mail: macaw@compuserve.com
Web:
www.ourworld.compuserve.com/
homepages/macaw

Magellan Systems
960 Overland Ct
San Dimas CA 91773-1742
909-394-5000; 800-669-4477
Fax: 909-394-7050
Web: www.magellanps.com

Magnavox Electronic Systems
2829 Maricopa St
Torrance CA 90503-5146
310-618-1200
Fax: 310-618-7001

Manon Engineering
515 Kirkland Way
Kirkland WA 98033-6219
425-827-7449; 800-426-9410
Fax: 425-827-7099
E-Mail: manoneng@manon.com
Web: www.manon.com

Marconi Instruments
13600 Heritage Pky
Fort Worth TX 76177-5300
817-224-9200; 800-233-2955
Fax: 817-224-9201
E-Mail: marconi@miadale.ccmail.
compuserve.com
Web: www.marconi-instruments.com

♦ Marketronics
320 International Pky
Sunrise FL 33325-6240
954-846-1011; 800-845-1230
Fax: 954-846-1672
E-Mail: sales@marketronics.com
Web: www.marketronics.com

Mason Electric
605 8th St PO Box 311
San Fernando CA 91340-1400
818-361-3366; 800-232-7700
Fax: 818-365-6809
E-Mail:
cogletree@mason_electric.com

MaSys
435 Ford Rd Ste 465
Minneapolis MN 55426-1065
612-546-9556

Max System Antennas
4 Gerring Rd
Gloucester MA 01930-4204
508-281-8892
Fax: 800-487-7539

Maxon America
10288 NW Airworld Dr
Kansas City MO 64153-1238
816-891-6320 X399; 800-821-7848
Fax: 816-891-8815

Maxrad
4350 Chandler Dr
Hanover Park IL 60103-6763
630-372-6800; 800-323-9122
Fax: 630-372-8077
E-Mail: sales@maxrad.com
Web: www.maxrad.com

Maxwell Safety Products
38 Riverview Terrace
Smithtown NY 11787-1154
516-6134
Fax: 516-361-6135

MCG Electronics
12 Burt Dr
Deer Park NY 11729-5747
516-586-5125; 800-851-1508
Fax: 516-586-5120
E-Mail: mcginfo@mcgsurge.com
Web: www.mcgsurge.com

MCM Electronics
650 Congress Park Dr
Centerville OH 45459-4072
937-434-0031; 800-543-4330
Fax: 937-434-6959
E-Mail: parts@mcmelectronics.com
Web: www.mcmelectronics.com

McManus Communications
400 N 5 St
Blytheville AR 72315-2703
870-763-6250
Fax: 870-763-6533
E-Mail: mcmanus@arkansasnet
Web: www.mcmanuscomm.com

Mech-Elec Systems
29958 Appaloosa Dr
Evergreen CO 80439-8667
303-674-1101; 800-929-4851

Mechem Electronics
PO Box 7846
(3605 Loren Whitney Dr)
Fredericksburg VA 22404-7846
540-891-0569
Fax: 540-891-0538

Megadata
35 Orville
Bohemia NY 11716-2522
516-589-6800
Fax: 516-589-6858

Meirick
420 S Hickory
Mount Vernon MO 65712-1822
417-466-3941; 800-735-5069
Fax: 417-466-4207

Melard Technologies
28 Kaysal Ct
Armonk NY 10504-1344
914-273-4488
Fax: 914-273-1775

Mentor Engineering
609 14th St NW Ste 503
T2N 2A1 Calgary AB Canada
403-777-3760
Fax: 403-777-3769
E-Mail: sales@mentoreng.ca
Web: www.mentoreng.com

Meridian Communications
23501 Park Sorrento Ste 213A

Calabasas CA 91302-1308
818-222-5655; 800-400-7483
Fax: 818-222-2857

Merry Electronics
15360 E Valley Blvd
City of Industry CA 91746-3335
818-333-8985; 800-227-5206
Fax: 818-333-0215
E-Mail: merryusa@aol.com

Metawave Communications
8700 148 Ave NE
Redmond WA 98052-3482
206-702-5600
Fax: 206-702-5970
Web: www.metawave.com

Metric Systems
6150 Yarrow Dr Ste E
Carlsbad CA 92009-1536
760-930-0401
Fax: 760-930-0403
E-Mail:
wireles1@metricsystems.com
Web: www.metricsystems.com

Metro Tel
250 S Milpitas Blvd
Milpitas CA 95035-5420
408-946-4600
Fax: 408-946-4069
E-Mail: metrotelco@aol.com
Web: members.aol.com/metrotelco/

Metromail
360 E 22nd St
Lombard IL 60148-4989
630-932-3097
Fax: 630-916-1336

Metroplex Mobile Data
1640 W Oakland Park Blvd
Ft Lauderdale FL 33311-1538
954-739-0850; 800-DATA-MAN
Fax: 954-735-0880
E-Mail: metroplex@juno.com
Web: www.safari.net/~markc

MFJ Enterprises
PO Box 494
Mississippi State MS 39762-0494
601-323-5869; 800-647-1800
Fax: 601-323-6551
E-Mail: mfj@mfjenterprises.com
Web: www.mfjenterprises.com

Micro Care
34 Ronzo Rd
Bristol CT 06010-7790
860-585-7912; 800-638-0125
Fax: 860-585-7378
E-Mail: mjones@microcare.com
Web: www.microcare.com

Microflect
PO Box 12985
Salem OR 97309-0985
503-363-9267; 800-547-2151
Fax: 503-363-4613
E-Mail: custinfo@microflect.com
Web: www.microflect.com/

Microlab/FXR
10 MicroLab Rd
Livingston NJ 07039-1602
201-992-7700
Fax: 201-992-0513
E-Mail: sales@microlab.fxr.com
Web: www.microlab.fxr.com

♦ Microwave Data Systems
175 Science Pkwy
Rochester NY 14620-4260
716-242-9600
Fax: 716-242-9620

Microwave Filter
6743 Kinne St
East Syracuse NY 13057
315-438-4700; 800-448-1666
Fax: 315-463-1467
E-Mail:
mfcsales@microwavefilter.com
Web: www.microwavefilter.com

D.T.M.F DECODER

For interconnect and remote
control applications

The Model

Model
NC401

micro-
miniature
DTMF
decoder,
designed for
selective control of local
or remote applications.

\$59.95

Measuring .80" W x 1.37" L x .23" H, the
NC401 combines three distinct, multi-
addressing decoders offering multiple
user-configurable functions. All pro-
grammed features are stored in non-
volatile E2Prom memory and are easily
programmed by means of a conventional
DTMF encoder or the Model NC500
Universal/P.C. programmer. This highly
engineered decoder is ideal for portable
radio applications having limited space
for accessories. The NC401 comes
complete with micro-miniature 14 pin
header and 12" color coded cable
assembly.

Nor-Tax Doc. #5545

VOICE SECURITY ENCRYPTION

The Model NC802

Model
NC802

is a miniature
inversion
scrambler
designed
to
provide
intermediate
level security for
two-way radio voice
communication systems
and is a perfect, cost-effective
solution to entry-level voice scrambling
as a defense against unauthorized or
casual listeners. The NC802 provides
eight user selectable carrier codes
commonly used by other manufacturers
and interfaces easily to most radios with
near transparency to the user

\$59.95

Nor-Tax Doc. #5759

For Detailed Specifications or Product Catalog
call our 24-Hour NorFax retrieval system
at 530-477-8403 or E-Mail norcomm@jps.net.

NORCOMM
DATA SIGNALING PRODUCTS
800-874-8663

15385 Carrie Dr., Grass Valley, CA 95949 USA

Circle (80) on Fast Fact Card

Microwave Radio Digital
11 Elizabeth Dr
Chelmsford MA 01824-4111
508-250-0843; 800-791-7747
Fax: 508-250-0843
E-Mail:
76322.3536@compuserve.com

Microwave Tower Service
1930 Lewis St SE
Salem OR 97302-1240
503-371-7030
Fax: 503-581-5188

Middle Atlantic Products
8 N Corporate Dr
Riverdale NJ 07457-1717
201-839-1011
Fax: 201-839-1976

Midian Electronics
2302 E 22nd St
Tucson AZ 85713-2000
520-884-7981; 800-MIDIAN
Fax: 520-884-0422
E-Mail: sales@midelec.com
Web: www.midelec.com

Midland Land Mobile Radio (See Intek Global Corporation)

Midwest Data Services
PO Box 178
Philo IL 61864-0178
800-553-6791
Fax: 217-684-2641
E-Mail: rpselle@netshtslltg.com

Miller Telecom Services
58120 CR 3 South
Elkhart IN 46517
219-294-6065; 800-423-2559
Fax: 219-293-7992

Minerich
PO Box 98
Richmond KY 40476
606-623-0024
Fax: 606-624-1839
E-Mail: sckraus@minerich.net

Minilec Service
9321 Eton Ave
Chatsworth CA 91311-5810
818-998-0826; 800-222-6075
Fax: 818-341-5355
E-Mail: asanuma@minilec.com
Web: www.minilec.com

Miracom Technologies
10945 State Bridge Rd
Ste 401/271
Alpharetta GA 30022
770-410-1170; 800-723-5532
Fax: 770-664-5498
Web: www.miracom.com

Missing Maps East View Cartographic
3020 Harbor Lane N
Minneapolis MN 55447-5137
612-694-9608
Fax: 612-559-2931
E-Mail: mapfinder@eastview.com
Web: www.missingmaps.com

MLJ
1110 N Glebe Rd Ste 800
Arlington VA 22201-4795
703-741-3500
Fax: 703-741-0312
E-Mail: info@mlj.com
Web: www.mlj.com

Mobile Communications Consulting
13017 Chestnut Oak Dr
Gaithersburg MD 20878-3556
301-926-2837
Fax: 301-926-2506
E-Mail:
103526.2202@compuserve.com

Mobile Data Communications
10850 N 24 Ave Ste 101
Phoenix AZ 85029-4796
602-678-3788
Fax: 602-678-4471
E-Mail: sales@mobiledatacom.com
Web: www.mobiledatocom.com

Mobile Data Specialists
14715 Brookside Forest
Houston TX 77040-2903
713-466-4609

Mobile International
PO Box 470485
Tulsa OK 74147-0485
918-252-2544; 800-765-3043
Fax: 918-252-2549

Mobile Mark
3900-B River Rd
Schiller Park IL 60176-2345
847-671-6690; 800-648-2800
Fax: 847-671-6715
E-Mail: sales@mobilemark.com
Web: www.mobilemark.com

Mobile Systems International
1755 N Collins Ste 400
Richardson TX 75080-3600
972-644-6886; 800-550-5522
Fax: 972-479-9901
Web: www.msi-us.com

Mobile Training Institute (MTI)
PO Box 8278
Lumberton TX 77657-0278
409-755-7838

MobileComm
1800 E County Line Rd Ste 300
Ridgeland MS 39157-1993
601-977-1648
Fax: 601-977-1779

Mobilex
115 Constitution Dr Suite 3
Menlo Park CA 94025
650-462-4510; 800-269-7678
Fax: 650-462-4519
E-Mail: sales@mobilex.com
Web: www.mobilex.com

Mod-Tek
PO Box 459
Rock Falls IL 61071-0459
815-625-5954
Fax: 815-625-4980

Modems Plus
3097-A Presidential Dr
Atlanta GA 30340-3914
770-458-2232; 800-888-7963
Fax: 770-452-1641
E-Mail: lthorsen@modemsplus.com

Modular Communications
PO Box 515068
Dallas TX 75251-5068
214-716-9888

Modular Communication Systems
13309 Saticoy St
North Hollywood CA 91605-3407
818-764-1333
Fax: 818-764-1992
Web: www.modocom.com

Molded Pulp Products
1780 Dreman Ave
Cincinnati OH 45223-2456
513-681-3016
Fax: 513-541-5945

Monicor Electronics
2964 NW 60 St
Fort Lauderdale FL 33309-1735
954-979-1907
Fax: 954-979-2611
E-Mail: sales@monicor.com
Web: www.monicor.com

Monroe Electronics
100 Housel Ave
Lyndonville NY 14098
716-765-2254; 800-821-6001
Fax: 716-765-9330
E-Mail: monroe@monroe-electronics.com
Web: www.monroe-electronics.com

Morcom International
5130 Duke St Ste 6
Alexandria VA 22304-2955
703-750-3414; 800-683-4101
Fax: 703-354-8843
E-Mail: info@morcom.com
Web: www.morcom.com

Morrow Technologies
2300 Tall Pines Dr
Largo FL 33771-5342
727-531-4000
Fax: 727-531-3531
E-Mail: tmurphy@morrowcorp.com
Web: www.morrowcorp.com

Moseley Associates
111 Castilian Dr
Santa Barbara CA 93117-3093
805-968-9621
Fax: 805-685-9638
E-Mail: info@moseleysb.com
Web: www.moseleysb.com

Motorola-IDEN Group
1301 E Algonquin Rd
Schaumburg IL 60091
847-725-4830; 800-247-2346
Fax: 800-247-2347
Web: www.motorola.com

Motorola Advanced Messaging Group
5401 N Beach St
Ft Worth TX 76137-2733
817-245-4663; 800-520-7243
Fax: 817-245-2141
E-Mail: focsci@email.mot.com
Web: www.mot.com/pagers/amg

Motorola Aftermarket Products
1313 E Algonquin Rd
Schaumburg IL 60196-4041
800-422-4210
Fax: 800-622-6210
Web: www.mot.cpm//accesspoint

Motorola
1500 Gateway Blvd
Boynton Beach FL 33426-8221
561-739-3927; 800-548-9954
Fax: 561-739-8885
E-Mail: f10392@email.mot.com
Web: www.mot.com

Motorola Land Mobile Products Sector
1301 E Algonquin Rd
Schaumburg IL 60196-1078
847-576-1000
Fax: 847-576-3117

Motorola Antenna Sites
1301 E Algonquin Rd 6th Fl
Schaumburg IL 60196-4041
888-888-7750
Fax: 888-889-1235
Web: www.mot.com/wnsg

Motorola Communication Test Equipment
PO Box 1417
Scottsdale AZ 85252-1417
800-505-TEST
Fax: 602-441-7028
E-Mail: cybertest@email.mot.com
Web: www.mot.com/test

Mountain Communications
399 Route 10 E
East Hanover NJ 07936
201-884-4100; 800-874-6631 NJ
Fax: 201-884-3373

Mounting Solutions
900 Grossman Dr
Schofield WI 54476-1845
715-355-5667
Fax: 715-359-0901

MPD Technologies
49 Wireless Blvd
Hauppauge NY 11788-3935
516-231-1400
Fax: 516-231-8081
E-Mail: sales@mpd.com
Web: www.mpd.com

Multicom
527 S Broadway
Moore OK 73160-5376
405-799-7356; 800-798-5842
E-Mail: info@multicom2way.com
Web: www.multicom2way.com

Multiplier Industries
PO Box 630 135 Radio Cr
Mount Kisco NY 10549-0630
914-241-9510; 800-642-2424
Fax: 914-241-9557
Web: www.multiplier.com

MX-COM
4800 Bethania Station Rd
Winston-Salem NC 27105-1200
910-744-5050; 800-638-5577
Fax: 910-744-5054

Myers Engineering International
PO Box 15908
Ft Lauderdale FL 33318-5908
954-345-5000
Fax: 954-345-5005

N

Nady Systems
6701 Bay St
Emeryville CA 94608-1023
510-652-2411
Fax: 510-652-5075
Web: www.nadywireless.com

Narda/L3 Communications
435 Moreland Rd
Hauppauge NY 11788-3926
516-231-1700
Fax: 516-231-1711

NATCOM (Kern Pager Repair)
834 Foley St
Jackson MS 39202-3404
601-352-4183; 800-844-5376
Fax: 601-948-8257
E-Mail: skern@natcominc.com;
tinat@natcominc.com
Web: www.natcominc.com

National Pager Services
1210 S. Vandeventer
St Louis MO 63110
314-531-5300; 800-677-5533
Fax: 314-531-9284

Navigation Data Systems
PO Box 23850
New Orleans LA 70183-0850
504-734-5566
Fax: 504-734-5081
E-Mail: fleettrak@aol.com
Web: members.aol.com/fleettrak

NCG/COMET Antenna
1275 N Grove St
Anaheim CA 92806-2114
714-630-4541; 800-962-2611
Fax: 714-630-7024
Web: www.cometantenna.com

Nearson
7839C Rolling Rd
Springfield VA 22153-2821
703-913-5552
Fax: 703-913-5553
E-Mail: novacom@nearson.com

NEC America
1555 W Walnut Hill Ln
Irving TX 75038-3702
972-751-7335; 800-421-2141
Fax: 972-751-7339
E-Mail: andersb@ccgate.dl.nec.com
Web: www.nec.com

Nemal Electronics International
12240 NE 14th Ave
North Miami FL 33161-6521
305-899-0900; 800-522-2253
Fax: 305-895-8178
E-Mail: info@nemal.com
Web: www.nemal.com

Neulink (Div of RF Industries)
7610 Miramar Rd
San Diego CA 85091
619-549-6340; 800-233-1728
Fax: 619-549-6345
E-Mail: rfi@rfindustries.com
Web: www.rfindustries.com

New Eagle International
PO Box 250 Hwy 24 & Madore St
Silver Lake KS 66539-9459
785-582-5823; 800-850-8512
Fax: 785-582-5820
E-Mail: neweagle@juno.com
Web: www.neweagle.com

New World Power Technology
1 N Wind Rd
Moretown VT 05660
802-496-2955
Fax: 802-496-2953

♦ **New-Tronics Antenna**
One Newtronics Pl
Mineral Wells TX 76067-9563
940-325-1386; 800-949-9490
Fax: 940-328-1409

♦ **Newmar**
PO Box 1306
Newport Beach CA 92663
714-751-0488; 800-854-3906
Fax: 714-957-1621
E-Mail: sales@newmarpower.com
Web: www.newmarpower.com

Newmark International
Two Perimeter Park S 475 West
Birmingham AL 35243
205-968-7200; 800-533-5103
Fax: 205-968-7201
E-Mail: commsales@newmark.com
Web: www.newmark.com

Nexacomm International
844 Ave of the Americas
New York NY 10001-4113
212-684-4600
Fax: 212-684-0188

Nida
2712 Foothill Blvd Ste A
La Crescenta CA 91214-3516
818-957-1248
Fax: 818-957-0719
E-Mail: nidacon@aol.com

Nikolai's
15451 Electronic Ln
Huntington Beach CA 92649-1333
714-373-2721; 888-645-5847
Fax: 714-373-2723
Web: www.nikolais.com

911 Dispatch Services
PO Box 1246
Benicia CA 94510-4246
707-747-0540; 800-582-0184
Fax: 707-747-0702
E-Mail: dispmag@aol.com
Web: www.911dispatch.com

♦ **NKX**
1814 Hancock St
Gretna LA 70053-3409
504-361-5525; 800-237-6519
Fax: 504-361-5526

Noise Cancellation Technologies
1 Dock St Ste 300
Stanford CT 06902-5836
203-961-0500 X386; 800-278-3526
Fax: 203-348-4106
Web: www.nct-active.com

Noise Com/
Wireless Telecom Group
E64 Midland Ave
Paramus NJ 07652
201-261-8797
Fax: 201-261-8339
E-Mail: info@noisecom.com
Web: www.noisecom.com

Norand
550 2nd St SE
Cedar Rapids IA 52401-2023
319-369-3100; 800-452-2757
Fax: 319-369-3453
E-Mail: webmaster@norand.com
Web: www.norand.com

♦ **Norcomm**
15385 Carrie Dr
Grass Valley CA 95949
530-477-8400; 800-874-8663
Fax: 530-477-8403
E-Mail: norcomm@jps.net

Northern Technologies
23123 E Mission Ave
Liberty Lake WA 99019-8514
509-927-0401; 800-727-9119
Fax: 509-927-0435

Northpoint Communications
Products
PO Box 4445
Chapel Hill NC 27515
919-403-8598
Fax: 919-403-8637
E-Mail: lopro123@aol.com
Web: www.nadtech.com/northpoint

♦ **NS Electronics Service**
3610 Dekalb Tech Pky
Ste 110/111
Atlanta GA 30340
770-451-3264
Fax: 770-458-8785
E-Mail:
nselectronics@mindspring.com
Web: www.nselectronics.com

♦ **NSI Communication**
30915 18th Ave S Ste C
Federal Way WA 98003-4907
253-946-2426; 800-977-0448
Fax: 253-946-8311
E-Mail: info@nsiradio.com
Web: www.nsiradio.com

Nutel Electronics
1324 Motor Pky
Hauppauge NY 11788-5226
516-234-2769
Fax: 516-234-2794
E-Mail: nutel@hoflink.com
Web: www.hoflink.com/~nutel

OKI Telecom
437 Old Peachtree Rd
Suwanee GA 30174-3507
770-995-9800; 800-554-3112
Fax: 770-822-2681

Olympic Radio
3062 SW State Highway Ste 16
Port Orchard WA 98366
800-257-7346
Fax: 360-377-2084

DISPATCHER ATTENTION!!

Cost-Effective Telephone 2-Way Radio Interface - Headset

The **SwitchMate II™** allows a dispatcher to use a single headset to operate an analog or digital telephone and a two-way radio.

The **JackMate™** radio-only interface allows the use of a headset with a footswitch or belt mount push to talk. These cost effective products improve your working conditions and allow handsfree switching.

RadioMate®
(800) 346-6442

Circle (81) on Fast Fact Card



Plug In A Headphone

Earmark's **ESMH™** (Earmark Speaker Mic with detachable Headphones) is ideal when you're not sure where your job will take you. Start with the Earmark Speaker Mic that matches your portable radio, plug in an Earmark headphone and match your communication needs to the workplace. Quick disconnect the headphone and you're back to regular speaker mic mode. ESMH comes equipped with the UHS-1 series headphone, for under helmet applications, or the BH-5 series for very high noise. High noise or low noise, ESMH generates critical comm capability. You stay in touch when you need it most.

Call us at **888-EARMARK** for your free trial and our new, Accessories for Portable Radios, catalog.



EARMARK®

1125 Dixwell Avenue, Hamden, CT 06514
Phone (203) 777-2130, Fax (203) 777-2886
<http://www.earmark.com>

ESMH1

Circle (82) on Fast Fact Card



UHF Trunking Amplifiers

Output Powers Available:

- ◆ 50 Watts
- ◆ 200 Watts
- ◆ 100 Watts
- ◆ 350 Watts



800 USA MADE
847-593-1213
FAX 847-593-1320
sales@vocomrf.com
www.vocomrf.com



Circle (83) on Fast Fact Card

Omni-Provincial Electronics
11577 Philippe-Panneton
H1E 4M1 Montreal Canada
514-648-2508
Fax: 514-648-0578

Omni Telecommunications
96 S Madison St
Carthage IL 62321-1331
217-357-2308
Fax: 217-357-2162

◆ **Omnicom**
930 Thomasville Rd Ste 200
Tallahassee FL 32303-6299
904-224-4451
Fax: 904-224-3059
E-Mail: omnicom@polaris.net

◆ **Omnicron Electronics**
581 Liberty Highway
Putnam CT 06260-2722
860-928-0377
Fax: 860-928-6477
E-Mail:
sales@omnicronelectronics.com
Web: www.omnielectronics.com

Omnidata International
124 S 600 W (PO Box 448)
Logan UT 84321-5026
801-753-7760
Fax: 801-753-6756

On Target Mapping
1051 Brinton Rd
Pittsburgh PA 15221-4571
412-241-7622; 800-700-MAPS
Fax: 412-241-7709
E-Mail: sales@otmapping.com
Web: www.otmapping.com

ONAN
1400 73rd Ave NE
Minneapolis MN 55432-3796
612-574-5000
Fax: 612-574-8087

Onsite Instruments
230 E Caribbean Dr
Sunnyvale CA 94089-1007
408-752-1640
Fax: 408-752-1625

Open Development
315 Norwood Park S
Norwood MA 02062-4655
617-440-5000
Fax: 617-440-5100
Web: www.opendev.com

Ophir RF
5300 Beethoven St
Los Angeles CA 90066
310-306-5556
Fax: 310-577-9779

OPM USA
325 Interstate Blvd
Sarasota FL 34240-8597
888-FLA-SITE
Fax: 941-379-4562

Optaphone Systems
PO Box 4000
Redway CA 95560
707-923-4000; 800-283-6006
Fax: 707-923-2655
E-Mail: sales@optaphone.com
Web: www.optaphone.com

◆ **Optoelectronics**
5821 NE 14 Ave
Fort Lauderdale FL 33334-5098
954-771-2050; 800-327-5912
Fax: 954-771-2052
E-Mail: sales@optoelectronics.com
Web: www.optoelectronics.com

ORA Electronics
9410 Owensmouth Ave
Chatsworth CA 91311-6903
818-772-2700

Fax: 818-718-8626
E-Mail: info@orausa.com
Web: www.orausa.com

◆ **Orbacom Systems**
1704 Taylors Ln
Cinnaminson NJ 08077-2537
609-829-4455
Fax: 609-829-6980
E-Mail: sales@orbacom.com
Web: www.orbacom.com

Ortel
2015 W Chestnut St
Alhambra CA 91803
626-281-3636; 800-362-3891
Fax: 626-281-8231
E-Mail: info@ortel.com
Web: www.ortel.com

◆ **Otto Communications**
2 E Main St
Carpentersville IL 60110-2693
847-428-7171; 888-234-6886
Fax: 847-428-1956
E-Mail: comsales@ottoeng.com
Web: www.ottoeng.com

P

PacComm Packet Radio Systems
4413 N Hesperides St
Tampa FL 33614-7618
813-877-9900
Fax: 813-872-8696
E-Mail: sales@paccomm.com
Web: www.paccomm.com

PACE
9893 Brewers Court
Laurel MD 20723-1905
301-490-9860
Fax: 301-498-3252

Pacific Circuit Design
10114 McDonald Park Rd
V8L 4C1 Sydney BC Canada
604-656-8849; 800-811-0388
Fax: 604-656-9933
E-Mail: t1urban@aol.com

Pacific Crest
990 Richard Ave Ste 110
Santa Clara CA 95050-2828
408-653-2070; 800-795-1001
Fax: 408-748-9984
E-Mail: sales@paccrst.com
Web: www.paccrst.com

Pacific West Electronics
1370 Logan Ave Ste A
Costa Mesa CA 92626-4024
714-957-3158; 800-722-3158
Fax: 714-662-5948
E-Mail: tfisc85267@aol.com

Padcom
2045 City Line Rd
Bethlehem PA 18017-7701
610-882-9940
Fax: 610-882-9516

PageMart Wireless
6688 N Central Expy
Dallas TX 75206
214-750-5809; 800-864-5809
Fax: 214-750-7687
E-Mail: bridgetc@pagemart.com
Web: www.pagemart.com

PageNet
1 Van de Graff Dr 6th Fl
Burlington MA 01803-5171

Pager Communications
7236 Raindeer Trail
San Antonio TX 78238
210-523-1044; 800-955-1044
Fax: 210-523-9749

PageRepair
175 Route 4 W
Paramus NJ 07652
201-845-7675; 800-632-5123
Fax: 201-845-0839
E-Mail: pri175@aol.com
Web: www.pagerepair.com

♦ **PageTap**
8200 E Pacific Place Ste 204
Denver CO 80231-3212
303-337-4811; 800-735-3650
Fax: 303-337-3084
E-Mail: doug@pagetap.com
Web: www.pagetap.com

PageTek
182-104 Wind Chime Ct
Raleigh NC 27615-6433
919-518-1828; 888-572-7907
Fax: 919-846-5586
E-Mail: sales@pagetek.net
Web: www.pagetek.net

Palstar Bramco
PO Box 1482
Piqua OH 45356-1082
937-773-6255
Fax: 937-773-8003

Pana-Pacific
541 Division St
Campbell CA 95008-6921
408-374-7900; 800-726-2333
Fax: 408-379-3928

Panasonic Communications Systems
Two Panasonic Way 7B-3
Secaucus NJ 07094-2917
800-441-PANA

PanaVise Products
7540 Colbert Dr
Reno NV 89511-1225
702-850-2900; 800-759-7535
Fax: 702-850-2929
E-Mail: info@panavise.com
Web: www.panavise.com

Paragon Engineering
990 NW 53rd St
Fort Lauderdale FL 33309-3105
954-776-2228; 800-368-0078
Fax: 954-776-2027

Parkinson Electronics
PO Box 1622
Levelland TX 79336-1622
806-894-1576; 800-332-7003
Fax: 806-894-7067
E-Mail: staff@parkinson-2way.com
Web: www.parkinson-2way.com

♦ **PCI-Pekaar Communication**
35 Trimble Ave
Clifton NJ 07011-1213
201-772-0704

P-Com
3715 S Winchester Blvd
Campbell CA 95008
408-866-3666
Fax: 408-866-3655
Web: www.p-com.com

PCSI
9645 Scranton Rd
San Diego CA 92121-1761
619-535-9500; 800-933-7274
Fax: 619-535-9235

Peiker Acustic
13620 Lincoln Way Ste 240
Auburn CA 95603-3261
530-888-3771
Fax: 530-888-3772

Peltor
41 Commercial Way
East Providence RI 02914-1020
401-438-4800; 800-EAR-MUFF
Fax: 401-434-1708

Peninsula Wireless Communications
1150 Morse Ave
Sunnyvale CA 94089-1605
408-747-1900
Fax: 408-747-0375

Penta
325 Edwards Ave
New Orleans LA 70123-4205
504-733-1700
Fax: 504-734-5041

PerCon
4906 Maple Springs/Ellery Rd
Bemus Point NY 14712-9723
716-386-6015
Fax: 716-386-6013
E-Mail: sales@perconcorp.com
Web: www.perconcorp.com

Personal Communications Industry Ass'n PCIA
502 Montgomery St Ste 700
Alexandria VA 22314-1520

703-739-0300; 800-759-0300
Fax: 703-836-1608

Philips Consumer Communications
5205 N O'Connor Ste 1100
Irving TX 75039-3781
972-432-1300
Fax: 972-432-1309

Phoenix Contact
PO Box 4100
Harrisburg PA 17111-0100
717-944-1300
Fax: 717-944-1625

Phonetix
111 Ave Rd Ste 701
M5R 3J8 Toronto ON Canada
416-925-2001
Fax: 416-968-7931

Photocomm
4585 McIntyre St
Golden CO 80403
303-988-8208; 800-999-8208
Fax: 303-988-9581
E-Mail:
72731.1235@compuserve.com
Web: www.photocomm.com

Photovoltaic Resources International
1902 N Country Club Dr Ste 8
Mesa AZ 85201-1771
602-834-7778
Fax: 602-610-8254
E-Mail: pvcad@primenet.com

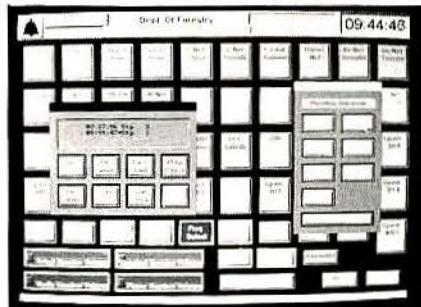
PMI Marketing
11711 Coley River Circle Ste 7
Fountain Valley CA 92708-4213
714-428-1157
Fax: 714-428-1166

Piceon
1996 Lundy Ave
San Jose CA 95131-1864
408-432-8030; 888-336-2983
Fax: 408-432-1276

Pike & Fischer Private Radio Rules Service
4600 East-West Hwy Ste 200
Bethesda MD 20814-1438
301-654-6262; 800-255-8131
Fax: 301-654-6297
E-Mail: pike@pf.com

♦ **Pipo Communications**
1516 Cassil Pl
Hollywood CA 90028-7106
323-466-5444
Fax: 323-466-1520
E-Mail: pipo@compuserve.com

The new
ULTRA-COM
NT
Windows
NT-Based
Radio Dispatch System



Moducom's new Windows-based **ULTRA-COM NT** is the only communications workstation that lets you design screens and set operating parameters with no changes to software and with no reprogramming costs, using MODUCOM's exclusive *Screenmaker* and *Customizer* programs.

Now, the new **MED/C** diagnostic program analyzes the status and performance of the hardware and software in the system and recommends corrective action if required.

The **ULTRA-COM NT**'s design, whether stand-alone or as part of a multi-position system, takes advantage of the latest advances in communications technology.

Moducom Windows NT-based dispatch consoles, are designed for today's emergency communications requirements, and for the future.

Write, phone or fax for detailed literature

MODULAR
COMMUNICATION
SYSTEMS, INC.

13309 Saticoy St.
No. Hollywood, CA 91605
(818) 764-1333 Fax (818) 764-1992
www.MODUCOM.COM

♦ **PiRod**
1545 Pidco Dr
Plymouth IN 46563-0128
219-936-4221
Fax: 219-936-6796
E-Mail: pirod@pirod.com
Web: www.pirod.com

PJ Leathercrafts
Unit 18, Suprema Bus Park,
Edington
TA7 9LF Somerset England
+44(0)1278 723360/70
Fax: +44(0)1278 723380

Plainview Batteries
23 Newton Rd
Plainview NY 11803
516-249-2873; 800-642-2354
Fax: 516-249-2873

Plant Equipment
42505 Rio Nedo St
Temecula CA 92590-3436
909-676-4802
Fax: 909-676-9651
E-Mail: htorrens@peinc.com
Web: www.peinc.com

PMC Assoc
9 Westlake Ct
Somerset NJ 08873-4702
908-563-0366
Fax: 908-563-9174
E-Mail: pmcassoc@ixnetcom.com

♦ **Polaris Industries**
470 Armour Dr NE
Atlanta GA 30324-3943
404-872-0722; 800-752-3571
Fax: 404-872-1038
E-Mail: polaris@polarisusa.com

♦ **PolyPhaser**
PO Box 9000
Minden NV 89423-9000
702-782-2511; 800-325-7170
Fax: 702-782-4476
E-Mail: info@polyphaser.com
Web: www.polyphaser.com

♦ **Porta-Tech**
121 Crowell Lane
Lynchburg VA 24502-3651
804-239-3049
Fax: Same as Phone

Positron
5101 Buchan St
H4P 2R9 Montreal PQ Canada
514-345-2200; 800-443-3313
Fax: 514-731-8662
E-Mail: sales@positron.qd.ca
Web: www.positroninc.com

The Pouch
5825 E Speedway Blvd
Tucson AZ 85712-5037
520-297-2184; 800-727-6824
Fax: 520-721-0955

Power Conversion Products
115 Erick St
Crystal Lake IL 60014
815-459-9100; 800-447-3484
Fax: 815-459-9118
E-Mail: info@pcp.com
Web: www.pcp.com

Power-Sonic
9163 Siempre Viva Rd
San Diego CA 92173
650-364-5001
Fax: 650-366-3662
E-Mail: battery@power-sonic.com
Web: www.power.sonic.com

Powerwave Technologies
2026 McGaw Ave
Irvine CA 92614-0911
714-757-6615
Fax: 714-757-0941

PRC Public Sector
12001 Sunrise Valley Dr
Reston VA 20191-3406
703-264-5400
Fax: 703-264-5595

Precision Tube Coaxitude Div
620 Naylor Mill Rd
Salisbury MD 21801-1106
410-546-3911
Fax: 410-546-3913

Preferred Networks
850 Center Way
Norcross GA 30071-4844
770-582-3500

♦ **Premier Communications**
480 Apollo St E
Brea CA 92821
714-257-0300
Fax: 714-257-0600
Web: www.pryme.com

Primus Electronics
18424 NW Frontage Rd
Joliet IL 60431-8663
815-436-8945; 800-435-1636
Fax: 800-767-7605

Prism Telecom Div/
TGA Technologies
3100 Medlock Bridge Rd Ste 150
Norcross GA 30071-1429
770-441-2100; 800-998-8421
Fax: 770-449-7740
E-Mail: prism@tga.com

Probe Research
3 Wing Dr Ste 240
Cedar Knolls NJ 07927-1000
201-285-1500
Fax: 201-285-1519

♦ **Procomm USA**
1372 Harmony Court
Thousand Oaks CA 91362-2014
805-497-2397; 800-497-2394
Fax: 805-497-2397

Professional Systems
PO Box 560
Hartland WI 53029-0560
414-369-5200; 800-542-4422
Fax: 414-369-5205
E-Mail: prosys@execpc.com
Web: www.shelters.com

Professional Technology Systems/
PT Systems
6 Four Coins Dr
Canonsburg PA 15317-1751
724-746-7133
Fax: 724-746-7152
E-Mail: moreinfo@ptsystems.com
Web: www.ptsystems.com

Pro-Fit International
1335 Eagandale Ct
Eagan MN 55121-1353
651-688-3588; 800-388-0073
Fax: 651-688-9876

Propheline
2120 S Waldron Ste 128E
Fort Smith AR 72903
501-452-6526
Fax: 501-452-1358
E-Mail: pauls@propheline.com
Web: www.propheline.com

Public Safety Systems (PSSI)
4401 Nicole Dr
Lanham MD 20706-4373
301-459-8600
Fax: 301-459-1987
E-Mail: fbrown@pssi.com
Web: www.pssi.com

Pulsar Microwave
48 Industrial West
Clifton NJ 07012
973-779-6262
Fax: 973-779-2727

Pulse Power
14691 NE 95th St
Redmond WA 98052-2556
206-885-4404; 800-225-3404
Fax: 206-881-6365
E-Mail: billd1938@aol.com

Pulstar Distributing
3520 International Dr
St Paul MN 55110-5251
651-490-9053; 800-634-4246
Fax: 651-490-7934
E-Mail: pulstar@visi.com

♦ **Pyramid Communications**
5142 Bolsa Ave Ste 103
Huntington Beach CA 92649-1048
714-901-5462
Fax: 714-901-5472

Q Cal Systems
4603 13th St NE Ste C
T2E 6M3 Calgary AB Canada
403-250-5383
Fax: 403-250-5370

QM Enterprises
1808 Walnut Creek Parkway
West Covina CA 91791-1945
818-966-0816
Fax: 818-966-3579

Quad State Towers
& **Communications**
RR 1/Box 87
Luverne MN 56156
507-283-8042

Qualcomm
6455 Lusk Blvd
San Diego CA 92121-2779
619-587-1121
Fax: 619-452-9096

Quantum Instruments
1075 Stewart Ave
Garden City NY 11530-4812
516-222-0611; 800-989-0505
Fax: 516-222-0569

Quick Draw Clip Systems
4869 McGrath St Ste 130
Ventura CA 93003-7767
805-644-6888; 888-254-7797
Fax: 805-644-6888
E-Mail: ron@clipsystems.com
Web: www.clipsystems.com

R-Columbia Products
2008 St Johns Ave
Highland Park IL 60035-2417
847-432-7915
Fax: 847-432-9181

Racal Recorders
15375 Barranca Pky Ste H-101
Irvine CA 92618-2209
714-727-3444; 800-847-1226

♦ **Racom Products**
5504 State Rd
Cleveland OH 44134-2250
216-351-1755; 800-722-6664
Fax: 216-351-0392

RaCoTek
7301 Ohms Lane Ste 200
Minneapolis MN 55439-2335
612-832-9800
Fax: 612-832-9383
Web: www.racotek.com

Radiall
150 Long Beach Blvd
Stratford CT 06497-7148
203-386-1030
Fax: 203-375-3808

The Radio Communications Group
10 Atlantic
Woburn MA 01801-1001
617-937-3730
Fax: 617-938-9098
E-Mail: fackovec@ix.netcom.com

Radio Control Systems (RCSI)
8125 Ronson Rd Ste G
San Diego CA 92111-2010
619-560-7008
Fax: 619-292-6955
Web: www.radioscan.com

Radio Dealers Leasing
212 N State St
Waseca MN 56093-2931
800-537-4399
Fax: 800-537-7696
E-Mail: rdl@rolleleasing.com
Web: www.rdlleasing.com

♦ **Radio Express**
PO Box 632
Centreville VA 20122-0632
703-266-1928; 800-545-7748
Fax: 703-830-8710

Radio-Onde
1018 rue Vanier
G1M 3L3 Vanier Canada

Radio Resources
1201 S Sharp St
Baltimore MD 21230-3753
410-783-0737; 800-54-RADIO
Fax: 410-783-4635

Radio Systems
3400 SW 26th Terrace
Fort Lauderdale FL 33312-5068
954-587-9135
Fax: 954-587-6738

Radio Unlimited
507 S Coltrane
Edmond OK 73034-6738
800-259-2929

♦ **Radio Wholesale**
3132 Mercury Dr
Columbus GA 31906-1713
706-561-7000; 800-53-RADIO
Fax: 706-568-4506
E-Mail:
104651.3652@compuserve.com
Web: www.radiowholesale.com

♦ **RadioMate**
4030-A Pike Ln
Concord CA 94520-1230
510-676-3376; 800-346-6442
Fax: 510-676-3387
E-Mail: radiomate@aol.com
Web: www.radiomate.com

♦ **RadioSoft**
109 W Knapp Ave
Edgewater FL 32132
904-426-2521; 888-723-4695
Fax: 904-423-0821
E-Mail: prmoncure@radiosoft.com
Web: www.radiosoft.com

Raine
6401 S Madison Ave
Anderson IN 46013-3336
765-622-7687; 800-826-5354
Fax: 765-622-7691
E-Mail: rainemail@raineinc.com
Web: www.raineinc.com

Ramsey Electronics
793 Canning Pky
Victor NY 14564-8924
716-924-4560; 800-446-2295
Fax: 716-924-4555

Rapid Deployment Towers
500 Throckmorton St Ste 1410
Fort Worth TX 76102
817-332-6311
Fax: 817-336-8929
E-Mail: juhii@aol.com

Rayfield Communications
2201 W Battlefield Ste 2
Springfield MO 65807-4084
417-887-4663; 800-743-9711
Fax: 417-887-1434
E-Mail: rayfield@ipa.net

Raytheon/TMS
701 Highlander Blvd Ste 220
Arlington TX 76015-4325
817-557-0200; 800-745-5580
Fax: 817-557-0212

♦ RCC Consultants
100 Woodbridge Center Dr
Woodbridge NJ 07095-1125
732-404-2400; 800-247-4796
Fax: 732-404-2556
E-Mail: info@rcc.com
Web: www.rcc-consult.com

♦ RCW Distributing
9635 Girard Ave S
Bloomington MN 55431-2619
612-884-8352; 800-726-9015
Fax: 612-884-8356
E-Mail: sales@radiocomm.com
Web: www.radiocomm.com

Reach Electronics
PO Box 308
Lexington NE 68850-0308
308-324-6661; 800-445-0007
Fax: 308-324-4985

Real Time Strategies
960 S Broadway Ste 118C
Hicksville NY 11801-5028
516-939-6655
Fax: 516-939-6189
Web: www.rts-inc.com

Record/Playtek
PO Box 1790 (110 E Vistula St)
Bristol IN 46507-1790
219-848-5233
Fax: 219-848-5333
E-Mail: stoll@recordplaytek.com
Web: www.recordplaytek.com

RELM Communications
7505 Technology Dr
West Melbourne FL 32904
800-821-2900
Fax: 407-984-0434
Web: www.relm-comm.com

RELTEC
5875 Landerbrook Dr Ste 250
Cleveland OH 44124-4069
216-246-6967
Fax: 216-246-4110

Remote Power
12301 N Grant St Ste 230
Denver CO 80241-3130
303-452-9383; 800-284-6978
Fax: 303-452-9519

Repeater Technologies
1150 Morse Ave
Sunnyvale CA 94089-1605
408-747-1900; 888-747-1515
Fax: 408-747-0375
E-Mail: davidb@repeaters.com
Web: www.repeaters.com

RF Connectors of RF Industries
7610 Miramar Rd
San Diego CA 92126-4202
619-549-6340; 800-233-1728
Fax: 619-549-6345
E-Mail: rfi@rfindustries.com
Web: www.rfindustries.com

♦ RF Imaging & Communications
510 Westair Blvd
Martinez CA 94553
408-929-2244; 510-498-6875 Pager
Fax: 408-929-0962
E-Mail: rfiimage@best.com
Web: www.best.com/~rfiimage

RF Industries
7610 Miramar Rd
San Diego CA 92126-4202
619-549-6340; 800-233-1728
Fax: 619-549-6345
E-Mail: rfi@rfindustries.com
Web: www.rfindustries.com

RF Products
PO Box 560033
Rockledge FL 32956-0033
407-631-0775
Fax: 407-631-0775

RF Technology
Unit 17 8 Leighton Place
2077 Hornsby NSW Australia
612-9476-5929
Fax: 612-9476-4932
E-Mail: rinfo@rftechnology.com.au
Web: www.rftechnology.com.au/~rinfo

♦ RFS Cablewave Systems
60 Dodge Ave
North Haven CT 06473-1124
203-239-3311
Fax: 203-239-7718

Richard Hirschmann of America
Industrial Row Box 229
Riverdale NJ 07457-0229
973-835-5002; 800-225-0524
Fax: 973-835-8354
E-Mail: ant-sales@hirschmann-usa.com
Web: www.hirschmann-usa.com

Richardson Electronics
40W267 Keslinger Rd PO Box 393
LaFox IL 60147-0393
630-208-2200; 800-348-5580
Fax: 630-208-2550
E-Mail: info@rell.com
Web: www.rell.com

Ridgewater College
Box 1097
Willmar MN 56201
320-235-5114; 800-722-1551
Fax: 320-231-2908
E-Mail: adenholm@ridgewater.mnsu.edu

Riser-Bond Instruments
5101 N 57th St
Lincoln NE 68507-3141
402-466-0933; 800-688-8377
Fax: 402-466-0967
E-Mail: email@riserbond.com
Web: www.riserbond.com

♦ Ritron
505 W Carmel Dr
Carmel IN 46032-7564
317-846-1201; 800-872-1872
Fax: 317-846-4978
E-Mail: ritron@ritron.com
Web: www.ritron.com

Rittal
One Rittal PI
Springfield OH 45504
937-399-0500; 800-477-4000
Fax: 937-390-5599
Web: www.rittal-corp.com

Roadrunner Communications
PO Box 654
South River NJ 08882-0654
732-254-3232
Fax: 732-257-4622
E-Mail: roadrunner@injersey.com

Rocky Mountain Communications
2023 Montane Dr E
Golden CO 80401-8099
303-526-5454
Fax: 303-526-2662

Rohde & Schwarz
4425 Nicole Dr
Lanham MD 20706-4352
301-459-8800
Fax: 301-459-2810
Web: WWW.RSD.DE

ROHN Industries
6718 W Plank Rd
Peoria IL 61604
309-697-4400
Fax: 309-697-5612
E-Mail: mail@rohnnet.com
Web: www.rohnnet.com

RosnerMark Rosner
Belmont Properties
1909 Harrison St
Hollywood FL 33020-5083
954-921-6610; 800-346-3859

RSI
1310 Main
Kiowa KS 67070-1636
316-825-4600; 888-830-5648
Fax: 316-825-4324
E-Mail: sales@rcomply.com
Web: www.rcomply.com

RSI Wireless Communications
1757 S Winthrop
Des Plaines IL 60018
847-298-9420
Fax: 847-635-7946
E-Mail: sales@rsiwa.com
Web: www.wirelessantennanet.com

2-WAY RADIO ACCESSORIES

Rugged, dependable accessories that work with all popular radios. Police departments, security organizations and government agencies at the highest levels around the world demand DTC.

Security Kits and Headsets for:

- ▲ **Tactical Team**
- ▲ **Bicycle Patrol**
- ▲ **Dignitary Protection**
- ▲ **Haz/Mat**

FREE 16 Page Catalog

Call 1-800-233-8639

DTC Communications, Inc.
Phone: 603/880-4411
Fax: 603/880-6965
info@dtccom.com
www.dtccom.com



Circle (85) on Fast Fact Card

Ruf*Nek Building Systems
3500 Mosely Rd
Aubrey TX 76227
817-365-2200
Fax: 817-365-2383
E-Mail: rfnek@aol.com

S

Sabre Communications
PO Box 536
Sioux City IA 51102-0536
712-258-6690; 800-369-6690
Fax: 712-258-8250
E-Mail: sabrecom@willinet.net

Herb Sachs Consulting
PO Box 729
Bowie MD 20718-0729
301-464-4268
Fax: 301-262-5988

SAFCO Technologies
6060 NW Hwy
Chicago IL 60631-2518
773-631-6216
Fax: 773-631-1626
E-Mail: sales@safco.com
Web: www.safco.com

Sage Instruments
240 Airport Blvd
Freedom CA 95019-2614
408-761-1000
Fax: 408-761-1008
E-Mail: sales@sageinst.com
Web: www.sageinst.com

Salisbury Engineering
1955 Northwood Dr
Salisbury MD 21801-7829
410-543-2141; 800-989-2141

Fax: 410-543-0641
E-Mail: sei@shore.intercom.net
Web: www.salisbury-engineering.com

Samco Antennas
2628 Whitmore
Fort Worth TX 76107-1910
817-336-4351
Fax: 817-336-7931
E-Mail: samyagi@flash.net
Web: www.flash.net/samyagi

♦ **Samlex America**
#110-17 Fawcett Rd
V3K 6V2 Coquitlam Canada
604-525-3836; 800-561-5885
Fax: 604-525-5221
E-Mail: samlex@samlexamerica.com
Web: www.samlexamerica.com

Savoy Electronics
1100 NE 7 Ave Ste A
Ft Lauderdale FL 33004-2598
954-563-1333; 800-359-5400
Fax: 954-563-1378

Scala Electronic
PO Box 4580
Medford OR 97501-0182
541-779-6500
Fax: 541-779-7753
E-Mail: mail@scala.net
Web: www.scala.net

SCC
6285 Lookout Rd
Boulder CO 80301-3318
303-581-5600
Fax: 303-581-0900

SCCI
7172 Regional St Ste 260
Dublin CA 94568-2324
Fax: 510-829-2417

♦ **Schaefer Radio**
130 W Fayette
Denver CO 80622
319-984-6115
Fax: 319-984-6220

Scientific Dimensions
2417 Aztec Rd NE
Albuquerque NM 87107-4224
505-345-8674; 800-523-6180
Fax: 505-345-2812
E-Mail: jpocon@aol.com

Scientific Technologies
6550 Dumbarton Cir
Remont CA 94555-3611

S-Com Industries
PO Box 1718
Loveland CO 80539-1718
970-663-6000
Fax: 970-669-1585
E-Mail: scomind@aol.com
Web: www.rmsd.com/scom/

Scott Communications
101 Mountain View Dr
St Ignatius MT 59865-9618
406-745-3218
Fax: 406-745-3218

SEA
7030 220th St SW
Mountlake Terrace WA 98043-2125
425-771-2182
Fax: 425-771-2650
E-Mail: salesmktg@sea-dmi.com
Web: www.sea-dmi.com

Secom Systems
3420 Oakcliff Rd Ste 103
Atlanta GA 30340-3010
770-452-1224; 800-252-4120
Fax: 770-457-9754
E-Mail: jhinerfeld@secom-systems.com
Web: www.secom-systems.com

♦ **Selectone**
3501 Breakwater Ave
Hayward CA 94545-3610
510-781-0376; 800-227-0376
Fax: 510-781-5454
E-Mail: admin@selectone.com
Web: www.selectone.com

Randall D Self CET
PO Box 730
Milton WA 98354-0730
206-318-7092

Seltronics Eyretel
9475 Lottford Rd
Landover MD 20774-5357
301-341-7400; 800-895-0803
Fax: 301-925-4780
E-Mail: dawn.thames@eyretel-usa.com
Web: www.eyretel.com

Sentry Mfg
PO Box 250 1201 Crystal Park
Chickasha OK 73023-0250
405-224-6780; 800-252-6780
Fax: 405-224-8808
E-Mail: Steve@sentrymfg.com
Web: www.sentrymfg.com

Sentry Services International
PO Box 372416
Satellite Beach FL 32937-0416
407-773-6090
Fax: 407-773-6092

Service Alert
600 Weaver Park Rd Ste A
Longmont CO 80501-6022
303-772-5022; 800-366-4083
Fax: 303-772-1362
E-Mail: srvcalert@aol.com
Web: www.servicealert.com

ServiceWare
200 Montcalm Ste R8
J8Y 3B5 Hull Canada
819-770-4000
Fax: 819-770-1795
E-Mail: info@serviceware.ca
Web: www.serviceware.ca

Setcom
1400 N Shoreline Blvd Ste B1
Mountain View CA 94043-1385
650-965-8020; 800-966-1034
Fax: 650-965-1193
Web: www.setcomcorp.com

SFA
1401 McCormick Dr
Largo MD 20774-5322
301-662-5926; 800-270-2669
Fax: 301-694-6279
E-Mail: hbeck@sfa.comm
Web: www.sfa.com

SGC
PO Box 3526
Bellevue WA 98009-3526
206-746-6310; 800-259-7331
Fax: 425-746-6384
E-Mail: sgc@sgcworld.com
Web: www.sgcworld.com

SGS U S Testing
291 Fairfield Ave
Fairfield NJ 07004-3885
201-575-5252; 800-777-8378
Fax: 201-575-7175
Web: www.ustesting.sgsna.com

Shadow Technologies
2801 Strauss Terrace
Silver Spring MD 20904-7148
301-847-0505
Fax: 301-847-0479

Shaffer Communications Group
3050 Post Oak Blvd Ste 1700
Houston TX 77056-6526
713-621-4499
Fax: 713-621-5751
E-Mail: sa@shafcomm.com
Web: www.shafcomm.com

♦ **Sharp Communication**
3403 Governors Dr
Huntsville AL 35805-3678
205-533-2484; 800-548-2484
Fax: 205-539-1663

Shieldmate Robotics
761 District Dr
Itasca IL 60143-1319
708-773-8801
Fax: 708-773-8813

♦ **Shinwa Communications of America**
6744 Melrose Ln
Oklahoma City OK 73127-6212
405-789-9371; 800-627-4722
Fax: 405-789-9370

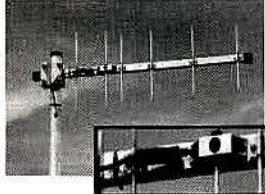
Shostock\Herschel Shostock Associates
11160 Veirs Mill Rd Ste 709
Wheaton MD 20902-2538
301-589-2259
Fax: 301-588-3311

♦ **Shure Brothers**
222 Hartley Ave
Evanston IL 60202-3632
847-866-2200; 800-25-SHURE
Fax: 847-866-2279
Web: www.shure.com

Siemens Solar Industries
4650 Adohr Ln
Camarillo CA 93012-8508
805-482-6800; 800-272-6765
Fax: 805-388-6395
E-Mail: sunpower@solarpv.com
Web: www.solarpv.com

ANTENNAS

Yagi Antennas



- Thick Wall Aluminum Boom
- Ferrite Balun
- Balanced Center Feed Design
- Cable Pigtail
- Moisture Proof Feed System



Omnidirectional Antennas

- Wide Bandwidth Performance
- Heavywall Fiberglass Radome
- Weather Resistant Design
- Cable Pigtail

Astron provides heavy duty mounting hardware with all our yagis and omni antennas. In addition to standard antennas, Astron offers accessories including mobile cable kits, cable assemblies and power dividers.

For a Catalog or to Order call:

703.450.5517

Astron Antenna Co.

22560 Glenn Dr, Ste 114, Sterling, VA 20164
www.astronantennas.com

Circle (86) on Fast Fact Card

Sierra Electronics
690 E Glendale Ave Ste 9B
Sparks NV 89431-5811
203-327-0899

The Signal
151 S Warner Rd Ste 304
Wayne PA 19087-2128
610-341-1300; 800-558-0551
Fax: 610-341-8939
E-Mail: insuranceinfo@thesignal.com

Signal Intelligence
PO Box 640891
San Jose CA 95164-0891
408-926-5630
Fax: 408-926-0303
E-Mail: info@scanstar.com
Web: www.scanstar.com

Signalcrafters
PO Box 3406
Lawrence KS 66046-0406
913-841-7556; 800-523-5815
Fax: 913-841-6133

Sigronics
822 N Dodsworth Ave
Covina CA 91724-2409
818-915-1993

Sigtec America
1555 Howell Branch Rd
Winter Park FL 32789-1109
407-628-4828; 800-525-8663
Fax: 407-628-5820
E-Mail: sigtec@worldnet.att.net

Silicon Valley Power Amplifiers
115 Phelan Ave Unit 10
San Jose CA 95112-6122
408-986-9700; 800-986-9700
Fax: 408-986-1438

Simrad
1717 S 341st Pl
Federal Way WA 98003-6837
206-952-2476
Fax: 206-952-2644

◆ **Simulcast Solutions**
18 Port Meadow Tr
Fairport NY 14450
716-223-4927
Fax: 716-223-3255
E-Mail:
sales@simulcastsolutions.com
Web: www.simulcastsolutions.com

Sinclair Technologies
85 Mary St
L4G 6X5 Aurora Canada
905-727-0165; 800-263-3275
Fax: 905-727-0861

Sitco Antennas
PO Box 20456
Portland OR 97294-0456
503-253-2000

Site Advantage
3100 Expressway Dr S
Islandia NY 11722-5013
516-582-4795; 888-SITE-ADV
Fax: 516-582-4772

Skaggs Telecommunications Service
5290 S Main St
Murray UT 84107-4743
801-261-4400; 800-879-1789
Fax: 801-261-1580

SKC Communication Products
91225 Barton
Lenexa KS 66214
913-888-7779

Sky King A&E
330 Hwy 236 W
Loneoke AR 72086
501-676-2959

Sky Probes/Modublox
8711 E Pinnacle Peak Rd Ste 305
Scottsdale AZ 85255-3517
602-502-1434; 800-525-2283
Fax: 602-502-0991

Skyline Radio
1260 NW Perimeter Rd Ste 215
Trottdale OR 97060-9525
503-492-7600
Fax: 503-492-0408

◆ **Slattery Software**
119 Annapolis Lane
Rotonda FL 33947-2204
941-697-8008

Small Business in Telecommunications
1835 K St Ste 650
Washington DC 20006-1203

Smartlink Development L P
2521 Schieffelin Rd Ste 128
Apex NC 27502-7001
919-303-2530
Fax: 919-303-2533
E-Mail: smartlink@ix.netcom.com

SmarTrunk Systems
23278 Berhardt St
Hayward CA 94545-1685
510-887-1950
Fax: 510-887-4011
E-Mail: salesinfo@smartrunk.com
Web: www.smartrunk.com

SMC Advanced Products
12519 Wanda Ln

Magnolia TX 77355-2003
281-356-0000; 800-527-1079
Fax: 281-356-0099
E-Mail: smc@smc-corp.com
Web: www.smc-corp.com

◆ **Smith Communications Service**
2121 Parrish Ave
Owensboro KY 42301-2604
502-683-0936
Fax: 502-684-3566

Software Concepts
182-104 Wind Chime Ct
Raleigh NC 27615
919-846-5583
Fax: 919-846-5586
E-Mail:
softwareconcepts@mindspring.com

◆ **SoftWright**
1010 S Joliet Ste 204
Aurora CO 80012-3150
303-344-5486
Fax: 303-344-2811
E-Mail: sales@softwright.com
Web: www.softwright.com

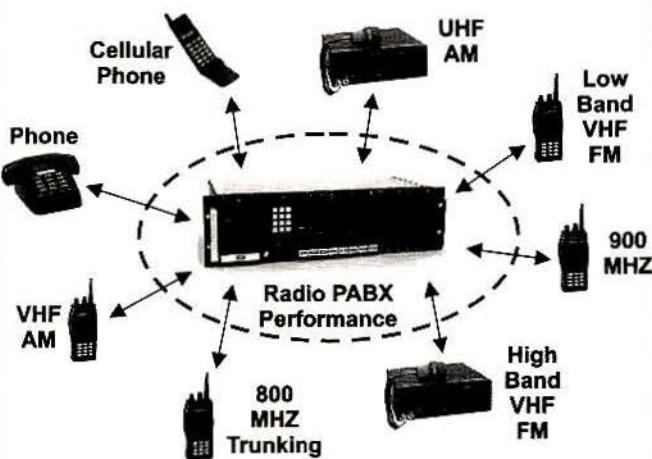
Solarex
630 Solarex Ct
Frederick MD 21703-8624
301-698-4200; 800-521-SOLAR
Fax: 301-698-4201
E-Mail: info@solarex.com
Web: www.solarex.com

Solid-State Communications
21060 Corsair Blvd
Hayward CA 94545-1387
415-785-4610; 800-227-1226
Fax: 415-785-7527

Solid-State Electronics
18646 Parthenia St
Northridge CA 91324-4027

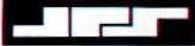
Cross-connect 12 different radios at one time!

ACU-1000 Intelligent Interconnect System



- Interfaces VHF, UHF, Cellular and Telephone Systems.
- Multiple Simultaneous Two-Way or Conference Calls.
- Unmanned Operation Permits Selecting Cross-Connections from Remote Radios.
- Built-In Voice Prompts Guide Users to Operation of System.
- Cross-Connects Trunking Talk Groups to Conventional Radio Nets.
- Sophisticated DSP Algorithms Provide Adaptive Hybrid, Voice Modulation Recognition VOX, and Noise Reduction.
- Optional Console Software Provides Full System Status and Control.

P.O. Box 97757, Raleigh, N.C. 27624
Phone: (919) 790-1011 • Fax: (919) 790-1456 • Tech Line: (919) 790-1048
http://www.jps.com • Internet: jps@jps.com



JPS Communications, Inc.

Sonic Communications
4 Colonial Cntr Box 287
New Ipswich NH 03071
603-878-1944; 800-688-1944
Fax: 603-878-1773
E-Mail: sonic.comms@pobox.com
Web: www.soniccomm.com

SONIK Technologies
310 Via Vera Cruz Ste 111
San Marcos CA 92069
760-752-1011
Fax: 760-752-1411
E-Mail: sales@sonik.com
Web: www.sonik.com

SpaceCom Systems
7140 S Lewis Ave
Tulsa OK 74136-5428
918-488-4800; 800-950-6690
Fax: 918-488-4848
E-Mail: info@spacecom.com
Web: www.spacecom.com

Spectra Engineering
30 Towerhill Rd
WA 6064 Alexander Heights Australia
618-9244-5989
Fax: 628-9244-5979

Spectracom
101 Despatch Dr
East Rochester NY 14445-1484
716-381-4827
Fax: 716-381-4998
E-Mail:
mailroom@spectracomcorp.com
Web: www.spectracomcorp.com

SpectraLink
5755 Central Ave
Boulder CO 80301
303-440-5330; 800-676-5465
Fax: 303-541-0750
E-Mail: info@spectralink.com
Web: www.spectralink.com

Spectrian
3080 Enterprise St Ste A
Brea CA 92821-6214
714-993-0802
Fax: 714-993-1619

Spectrum Communications
1055 W Germantown Pike
Norristown PA 19403-3912
610-631-1710; 800-220-1710
Fax: 610-631-5017

Spectrum Site Management
510 Bering Dr Ste 310
Houston TX 77057-1400
713-789-5600; 800-966-8885
Fax: 713-789-1313

Speedcall
21026 Alexander Ct
Hayward CA 94545-1234
510-783-5611
Fax: 510-783-5619

Spillman Data Systems
810 S 100 W
Logan UT 84321-5929
801-753-1610; 888-774-5562
Fax: 801-753-3031
E-Mail: cbourdelais@spillman.com
Web: www.spillman.com

Spilsbury Communications Div of Racial Canada
1495 Franklin St
V5L 5B6 Vancouver BC Canada
604-254-6411
Fax: 604-254-2080
E-Mail: sales@ractalcanada.com
Web: www.mindlink.net/racial_canada

SRC Cables
5590 Skylane Blvd
Santa Rosa CA 95403-1030
707-573-1900

Fax: 707-573-1999
E-Mail: Dan@src-cables.com
Web: www.src-cables.com

SSAC
PO Box 1000
Baldwinsville NY 13027-1000
315-638-1300
Fax: 315-638-0333
E-Mail: info@ssac.com
Web: www.ssac.com

St Louis Electronics
120 Progress Pkwy
St Louis MO 63043-3012
314-878-2333
Fax: 314-878-2712

Stencil
2644 S Croddy Way
Santa Ana CA 92704-5238
714-546-2002; 800-STANCIL
Fax: 714-546-2092

Standard Communications Land Mobile Div
PO Box 92151
Los Angeles CA 90009-2151
310-532-5300; 800-867-4140
Fax: 800-767-9196
E-Mail: landmobile@standard
Web: www.standardcomm.com

Standard Telecom America
2320 Walsh Ave
Santa Clara CA 95051-1311
408-986-8989
Fax: 408-986-1508

StateLine Communications
1302 Mitchell St
West Plains MO 65775-6301
417-257-2222; 800-467-2346
Fax: 417-257-2411
E-Mail: stateline@townsq.com

Statpower Technologies
7725 Lougheed Hwy
V5A 4V8 Burnaby BC Canada
604-420-1585; 800-670-0707
Fax: 604-420-1591
E-Mail: Ineill@statpower.com
Web: www.statpower.com

Stealth Network Technologies
5300 International Blvd
North Charleston SC 29418-6937
800-755-0689
Fax: 803-760-3588
E-Mail: jhalde1127@aol.com
Web: www.stealthsite.com

Stellar Communications
PO Box 1120
Vinita OK 74301-1120
918-256-7883
Fax: 918-256-2558

♦ Sterling Associates
203 N Chestnut St
McKinney TX 75069-3901
972-562-2299; 800-786-2199
Fax: 972-562-7957
E-Mail: sales@usedtowaway.com
Web: www.usedtowaway.com

STI-CO Industries
11 Cobham Dr
Orchard Park NY 14127-4101
716-662-2680
Fax: 716-662-5150
E-Mail: salesmkt@disguiseguys.com
Web: www.sti-co.com

Stored Energy Systems
1840 Industrial Circle
Longmont CO 80501-6524
303-678-7500
Fax: 303-678-7504
E-Mail: info@sens-usa.com
Web: www.sens-usa.com

Storm Products
116 Shore Dr
Hinsdale IL 60521-5884
630-323-9121; 888-347-8676
Fax: 630-323-9398
Web: www.stormproducts.com

The Strategis Group
1130 Connecticut Ave NW Ste 325
Washington DC 20036-3904
202-530-7500
Fax: 202-530-7550
E-Mail: info@strategisgroup.com
Web: www.strategisgroup.com

Stuart Electronics
79-12 Parsons Blvd
Flushing NY 11366-1997
718-591-9700
Fax: 718-591-5609

Subscriber Computing
18881 Von Karman Ave #450
Irvine CA 92612-1561
714-260-1500
Fax: 714-260-1515
E-Mail: sales@subscriber.com
Web: www.subscriber.com

Summit Telecommunications
879 Rainier Ave N Ste A203
Renton WA 98055-1380
206-772-4412
Fax: 206-772-1446

Summitek Instruments
PO Box 64
Parker CO 80134-0064
303-768-8080
Fax: 303-768-8181
E-Mail:
sales@summitekinstruments.com
Web:
www.summitekinstruments.com

Sun Mfg
PO Box 559
Vienna GA 31092-0559
912-268-7137; 800-786-1110
Fax: 912-268-7139
E-Mail: sunusa@sowega.net

Sunelco
PO Box 1499
Hamilton MT 59840-1499
406-363-6924; 800-338-6844
Fax: 406-363-6046

Sunrise Credit Services
2174 Jackson Ave
Seaford NY 11783-2608
516-785-1300; 800-645-9824
Fax: 516-785-1310

Sunrise Telecom
22 Great Oaks Blvd
San Jose CA 95119-1309
408-363-8000; 800-701-5208
Fax: 408-363-8313
E-Mail: info@sunrisetelecom.com
Web: www.sunrisetelecom.com

Super Wireless Warehouse
2880 Gratiot Ave Ste B-205
Roseville MI 48066
810-774-6633; 800-837-3237
Fax: 810-774-4466

Survey Technologies
17980 SW Shadypk
Beaverton OR 97007-8795
503-848-8500
Fax: 503-848-8534
E-Mail: sales@surveytech.com
Web: www.surveytech.com

Swager Communications
PO Box 569
Angola IN 46703-0569
219-495-2515; 800-988-5601
Fax: 219-495-4205

Swift Textile Metalizing
PO Box 66
Bloomfield CT 06002-0066
860-243-1122
Fax: 860-243-0848

Switzer Products
5700 Walnut St
Richmond IL 60071
815-678-2222; 800-611-7260
Fax: 815-678-2209
E-Mail: switzer@gte.net
Web: www.switzerproducts.com

SWS Security
1300 Boyd Rd
Street MD 21154-1836
410-879-4035; 800-776-8274
Fax: 410-836-1190
E-Mail: sales@swssec.com
Web: www.swssec.com

Synergetic Systems
10306 Eaton Place Ste 400
Fairfax VA 22030-2201
703-385-7272
Fax: 703-352-8236
E-Mail: meh@hq.psiint.com
Web: www.synergeticsystems.com

Synetcom Digital
1426 Aviation Blvd Ste 203
Redondo Beach CA 90278-4062
310-379-2000
Fax: 310-372-2331

T

Tactical Electronics
PO Box 1743
Melbourne FL 32902-1743
407-676-6907
Fax: 407-951-4630
E-Mail: data@tacel.com
Web: www.tacel.com

Tad Radio of Canada
PO Box 10160, S 164 Washington
St 500
Spokane WA 99210-0500
509-456-5885; 800-776-5817
Fax: 509-456-5886
E-Mail: tadradio@junction.net

Tadiran
2 Seaview Blvd
Port Washington NY 11050-4634
516-621-4980; 800-786-4899
Fax: 516-621-4517
E-Mail: sales@tadiranbat.com
Web: www.tadiranbat.com

Tait Electronics
9434 Old Katy Rd Ste 110
Houston TX 77055-6366
713-984-8684; 800-222-1255
Fax: 713-468-6944
E-Mail: taitus@insync.net
Web: www.taitusa.com

Talley Communications
12866 Ann St Bldg 1
Santa Fe Springs CA 90670-3214
562-906-8000; 800-949-7079
Fax: 562-906-8080
E-Mail: sales@talleycom.com
Web: www.talleycom.com

Tandem Computers
19191 Vallico Parkway Ste 40
Cupertino CA 95014-2525
408-725-6000
Fax: 408-285-6938

Tatung Telecom
1050 Terra Bella Ave
Mountain View CA 94043
650-961-6193 X237
Fax: 650-961-0244
E-Mail: kglas@tatungtel.com
Web: www.tatungtel.com

TCC Industries
13140 Alondra Blvd
Cerritos CA 90703-2238
562-926-8885; 888-822-8885
Fax: 562-926-0888
E-Mail: tcc@tccinc.com
Web: www.tccinc.com

TEAC America
7733 Telegraph Rd
Montebello CA 90640-6540
213-726-0303 X752
Fax: 213-727-7621
E-Mail: dwhite@teac.com
Web: www.teac.com

Technology Futures
13740 Research Blvd Ste C-1
Austin TX 78750-1859
512-258-8898; 800-835-3887
Fax: 512-258-0087
E-Mail: info@tfi.com
Web: www.tfi.com

Technostores (Headquarters)
#15 State Highway 46 W
Dover NJ 07801-3490
201-361-3400
Fax: 201-361-4496
E-Mail: technostore@ix.netcom.com

Tekk
226 NW Pkwy
Kansas City MO 64150-9569
816-746-1098; 800-521-8355
Fax: 816-746-1093
E-Mail: tekkin@planetkc.com

Tekno Industries
795 Eagle Dr
Bensenville IL 60106-1944
630-766-6960
Fax: 630-766-5633
E-Mail: ussales@teknoind.com
Web: www.teknoind.com

TekNow
4909 E McDowell Rd
Phoenix AZ 85008-4293
602-266-7800; 800-279-9700
Fax: 602-266-4241
E-Mail: teknow@teknow.com

Tektronix
PO Box 500 Howard Vollum Pk
Beaverton OR 97077-0001
503-627-7111; 800-426-2200
Fax: 503-222-1542
Web: www.tek.com

Telco Services
901 Hilltop Dr
Itasca IL 60143
630-775-1515
Fax: 630-775-9040
E-Mail: aposales@aol.com

Telecom Analysis Systems
34 Industrial Way E
Eatontown NJ 07724-3319
908-544-8700
Fax: 908-544-8347
Web: www.taskit.com

Telecommunications Engineering Associates
1160 Industrial Rd Bldg 15
San Carlos CA 94070-4128
650-871-4200
Fax: 650-367-7240
E-Mail: info@tcomeng.com
Web: www.tcomeng.com/

Telecommunications Industry Assoc
2001 Pennsylvania Ave Ste 800
Washington DC 20006-1850
202-457-4912

Teledesign Systems
1710 Zanker Rd
San Jose CA 95112-4215

Teledyne Brown Engineering Energy Systems
10707 Gilroy Rd
Hunt Valley MD 21031-1325
410-771-8600
Fax: 410-771-8618
Web: www.tbe.com

Telegen Group
660 First Bank Dr
Palatine IL 60067
847-776-3400
Fax: 847-776-3406
E-Mail: dbhorn@telegengroup.com
Web: www.telegengroup.com

Telelink Communications
2696 Nootka St
V5M 3M5 Vancouver BC Canada
604-254-7880; 800-567-8884
Fax: 604-254-1853
E-Mail: sales@telalink.com

Telemobile
19840 Hamilton Ave
Torrance CA 90502-1346
310-538-5100
Fax: 310-532-8526
E-Mail: telemobile@telemobile.com
Web: www.telemobile.com

♦ TelePath
49111 Milmont Dr
Fremont CA 94538-7347
510-656-5600; 800-292-1700
Fax: 510-656-2114
E-Mail: radiosales@tele-path.com
Web: www.tele-path.com

Telephonics
815 Broadhollow Rd
Farmingdale NY 11735
516-755-7000; 800-388-7111
Fax: 516-549-6100

TeleResources Pty
P O Box 693
2100 Brookvale NSW Australia
+61 2 9975 2230
Fax: +61 2 9975 2240
E-Mail: teleres@teleres.com.au

Telescada
10 Old Mine Rock Way
Hingham MA 02043-4326
781-740-0226
Fax: 781-740-4227
E-Mail: sales@telescada.com
Web: www.telescada.com

Teletech
PO Box 85567
Westland MI 48185-0567
313-641-2300
Fax: 313-641-2323

TeleTechniki
118 Z Pigi Str
11473 Athens Greece
+30 1 364 7269
Fax: +30 1 364 7269
E-Mail: teletechniki@promethcus.hol.gr

Television Equipment Assoc
PO Box 499
South Salem NY 10590-0499
914-763-8893
Fax: 914-763-9158
E-Mail: tea-nyc.msn.com
Web: www.swatheadsets.com

♦ Telewave
1155 Terra Bella Ave
Mountain View CA 94043-1831
650-968-4400; 800-331-3396
Fax: 650-968-1741
E-Mail: sales@telewave.com
Web: www.telewave.com

Telewave Ltd
2328 Clarke St
V3H 1Y8 Port Moody BC Canada

604-939-8315
Fax: 604-939-0544

Telex Communications
8601 Cornhusker Hwy
Lincoln NE 68507
402-467-5321; 800-752-7560
Fax: 402-467-3279
E-Mail: jeffchapelle@telex.com
Web: www.telexlandmobile.com

Telogy
3885 Bohannon Dr
Menlo Park CA 94025-1001
415-462-5346
Fax: 415-462-5152

Telsar
11025 Sorrento Valley Court
San Diego CA 92121-1410
619-597-6677
Fax: 619-455-0036

Teltone
22121 20th Ave SE
Bothell WA 98021-4424
425-487-1515; 800-426-3926
Fax: 425-487-2288
E-Mail: info@teltone.com
Web: www.teltone.com

Temex Electronics
3030 W Deer Valley Rd
Phoenix AZ 85027-2301
602-780-1995
Fax: 602-780-2431

TESSCO
34 Loveton Cir
Sparks MD 21152-9202
410-472-7000; 800-472-7373
Fax: 410-472-7575
E-Mail: info@tessco.com
Web: www.tessco.com

3dbm
975 Flynn Rd
Camarillo CA 93012-8704
805-445-4700
Fax: 805-445-4705
E-Mail: 3dbm_inc@3dbm.com
Web: www.3dbm.com

♦ Thunder Eagle
PO Box 625
Vienna VA 22183
703-242-0122; 888-877-8022
Fax: 703-281-7459
E-Mail: dgropper@thuneagle.com
Web: www.thuneagle.com

Tiburon
475 Sansome St Ste 810
San Francisco CA 94111-3138
415-956-3800
Fax: 415-956-0200
E-Mail: craig@tibinc.com
Web: www.tibinc.com

Tic General
1110 Airport Rd PO Box 1
Thief River Falls MN 56701-0001
218-681-1119; 800-842-7464
Fax: 218-681-8509

Til-Tek
1555 Sherman Ave Ste 304
Evanston IL 60201
847-864-1780
Fax: 847-804-1831
E-Mail: info_tiltek@msn.com

Times Microwave Systems
358 Hall Ave
Wallingford CT 06492-3555
203-949-8432; 800-TMS-COAX
Fax: 203-949-8423
E-Mail: jlanae@timesmicrowave.com
Web: www.timesmicrowave.com

DESKTOP POWER SUPPLY with BATTERY BACK-UP

BATTERY INCLUDED



MODEL DTB-12

Automatically switches to built-in battery when AC input fails. Maintains internal battery charge. Additional batteries can be added externally. 12 amp/7 amp continuous @ 13.8 VDC. Sealed Gel-cell 7 amp hour battery delivers 12 VDC, back-up mode.

PORTABLE POWER SUPPLY and BATTERY CHARGER



3 amps. Cig lighter socket. Auto ranging 110/220 VAC. UL/CSA. Great for cellular/PCS/faxes/modems/computers. Small size. Pegboard packaged. Bar coded.

ORDER

TOLL FREE:

1•800•467•6741

or **FAX TOLL FREE: 1•800•825•1403**

**CONTACT YOUR
COMMUNICATIONS
DISTRIBUTOR**

**DuraComm®
CORPORATION**

www.duracomm.com
e-mail: duracomm@duracomm.com

Circle (67) on Fast Fact Card

Receive Weather Alerts Automatically

on your 2-way radio system, PA system, voice-mail, numeric pager or telephone!

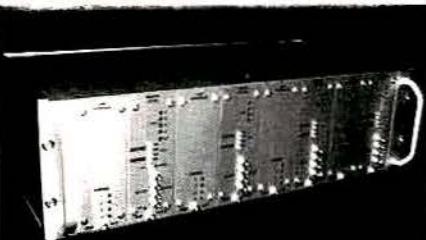
- Rack-mount and mobile systems
- Warnings digitally recorded for DTMF access and playback
- Designed specially for demanding Public Safety use

Call toll free 1-888-877-8022
or visit our Web site at:
<http://www.thuneagle.com>



U.S. Patents 5,444,433 • 5,574,999 • D.377,795

Circle (69) on Fast Fact Card



4RV/2 VOTER

- Continuous or "vote-lock" mode
- Available as a card or in a rack system
- Price Performance leader for 10 years
- Extend coverage by adding receivers
- Thousands of DHE Voters in service
- 4 Channels expandable to 64
- Many custom applications
- Select / disable switches
- RF Links or phone lines
- Opto-isolated I/O
- Signal-To-Noise
- Modular design

STARTING AT JUST
\$410

For more details call, fax, or write to:

Doug Hall Electronics
815 E. Hudson St
Columbus, Ohio 43211
(614) 261-8871
FAX (614) 261-8805
<http://www.dheco.com>

Circle (70) on Fast Fact Card

T&J Marketing
PO Box 3641
Scottsdale AZ 85271-3641
602-945-5651
Fax: 602-990-7610
E-Mail: tandjmktg@aol.com
Web: www.cellsmr.com

TLP Technologies
PO Box 1309
Westhampton Beach NY 11978-7309
516-288-8228; 800-441-5188
Fax: 516-288-5788

Tomorrow
PO Box 13549
Salem OR 97309-1549
503-581-8101 X3476
Fax: 503-364-2138

II Morrow
PO Box 13549
Salem OR 97309-1549
503-581-8101
Fax: 503-364-2138

Torfino Enterprises
3500 Fairlane Farms Rd, Ste 3
West Palm Beach FL 33414-8749
561-790-0111; 800-TORFINO
Fax: 561-790-0080
E-Mail: torfino@magginet.com
torfino@register.com
Web: www.torfino.com

Towercom Midwest LLC
621 Mehring Way Ste 418
Cincinnati OH 45202
513-621-8011; 800-360-9229
Fax: 513-621-8055
E-Mail: towerjim@aol.com

Tower Site Services
20015 W National Ave
New Berlin WI 53146-4908
414-679-8330

Tower Structures
1869 Nirvana Ave
Chula Vista CA 91911-6199
619-421-1181
Fax: 619-421-0533
Web: www.towerstructures.com

Tower Systems
PO Box 1474
Watertown SD 57201-6474
605-886-0930
Fax: 605-886-0932
E-Mail: jhardee@towersystems.com
Web: www.towersystems.com

Tower Technology
105-H Dunbar Ave
Oldsmar FL 34677-2951
813-854-1518
Fax: 813-855-1969

TowerWatch
135 SW Jackson
Topeka KS 66603-3311
913-233-5054; 800-475-1780
Fax: 913-234-6848

TPL Communications
3370 San Fernando Rd Ste 206
Los Angeles CA 90065-1437
213-256-3000; 800-HI-POWER
Fax: 213-254-3210
E-Mail: electronic@compuserve.com
Web: www.tpl-dxrs.com

Transamerica Distribution Finance
304 Inverness Way S
Denver CO 80112-5828
303-754-8302; 800-849-9952
Fax: 800-851-6059
E-Mail: james.brandt@transamerica.com
Web: www.transamerica.com

Transcom
271 Main St
Eastchester NY 10707-2901
914-779-3676
Fax: 914-633-9315

Transcrypt International
4800 NW 1st St
Lincoln NE 68521-4429
402-474-4800; 800-228-0226
Fax: 402-474-4858
E-Mail: sales@transcrypt.com
Web: www.transcrypt.com

Transelectric
300 N Maryland PO Box 307
Jackson MO 63755-1429
573-243-5186; 800-333-2589
Fax: 573-243-6095

Transportation Recording Systems
302 S Jones St
Barneveld WI 53507-9701
608-924-3333
Fax: 608-437-4530

Transportation Safety Devices
2400 Roosevelt/TSD Building
Indianapolis IN 46218-4287
317-263-9160; 800-428-4449
Fax: 317-263-0979

Transtector Systems
10701 Airport Dr
Hayden Lake ID 83835
208-772-8515; 800-882-9110
Fax: 208-762-6133
E-Mail: sales@transtector.com
Web: www.transtector.com

Transtronics
3209 W 9th St
Lawrence KS 66049-3127
913-841-3089
Fax: 913-841-0434

Trapunto
7950 Deering Ave Ste B
Canoga Park CA 91304-5007
818-227-9600

Trident Micro Systems
Two Trident Dr
Arden NC 28704
704-684-7474
E-Mail: sales@mobilerradio.com
Web: www.tridentms.com

Trilithic
9202 E 33rd St
Indianapolis IN 46236-4200
317-895-3600; 800-344-2412
Fax: 317-895-3613
E-Mail: dave@trilithic.com
Web: www.trilithic.com

Trilogy Communications
2910 Highway 80 E
Pearl MS 39208-3409
601-932-4461; 800-874-5649
Fax: 601-939-6637
E-Mail: info@trilogicoax.com
Web: www.trilogicoax.com

Trimble Navigation
645 N Mary Ave
Sunnyvale CA 94086-2933
408-481-2905

Tripp Lite
1111 W 35th St
Chicago IL 60609
773-869-1111
Fax: 773-869-1230
E-Mail: info@tripplite.com
Web: www.tripplite.com

TriTech Software Systems
10717 Sorrento Valley Rd
San Diego CA 92121
619-453-7000
Fax: 619-453-8709

E-Mail: sales@tritech.com
Web: www.tritech.com

♦ **Triton Electronics**
4300 Lincoln Ave Ste O
Rolling Meadows IL 60008-1157
847-934-6426
Fax: 847-934-7195
E-Mail: tritonelec@aol.com
Web: www.tritonelec.com

TRL Technologies
2155 Stonington Ave
Hoffman Estates IL 60195-2039
847-519-9690

Trompeter Electronics
3186 La Baja Dr
Westlake Village CA 91352
818-707-2020
Fax: 818-706-1040

♦ **Trott Communications Group**
1425 Greenway Dr Ste 350
Irving TX 75038-2455
972-580-1911
Fax: 972-580-0641
E-Mail: info@trottgroup.com
Web: www.trottgroup.com

Tru-Connector
245 Lynnfield St
Peabody MA 01960-5099
508-532-0775; 800-COAXTRU
Fax: 508-531-6993
E-Mail: trusales@tru-con.com
Web: www.tru-con.com

TruePosition
1111 W DeKalb Pike 2nd Fl
Wayne PA 19087
610-631-7500
Fax: 610-631-7501

TRW
One Space Park MS R9-1076
Redondo Beach CA 90278-1072
310-814-5927
Fax: 310-814-7535

Trylon-TSF
PO Box 186
N3B 2Z6 Elmira ON Canada
519-669-5421
Fax: 519-669-8912
E-Mail: rod@trylon.com
Web: www.trylon.com

Tunnel Radio of America
33856 Eastgate Circle SE
Covallis OR 97333
541-758-5637
Fax: 541-758-1417
E-Mail: info@Tunnelradio.com
Web: www.tunnelradio.com

Turnkey Wireless Solutions
2215 York Rd Ste 110
Oakbrook IL 60521-2375
847-382-7404
Fax: 630-472-1209

TwitCo Distributing
138 Turnpike Rd PO Box 447
New Ipswich NH 03071
603-878-0532; 800-899-8948
Fax: 603-878-2090

TWR Telecom
1630 Elmview
Houston TX 77080-7223
713-973-6904
Fax: 713-973-0205
Web: www.twrcorporations.com

♦ **TX RX Systems, Member of Bird Technologies Group**
8625 Industrial Pky
Angola NY 14006-9692
716-549-4700
Fax: 716-549-4772

E-Mail: seanj@txrx.com
Web: www.txrx.com

U

Ultimate Solutions
1920 E Hallandale Beach Blvd
Ste 808
Hallandale FL 33009-4726
954-458-4321; 800-927-1212
Fax: 954-456-2898

Uniden Private Radio Comm's
4700 Amon Carter Blvd
Fort Worth TX 76155-2297
817-858-3300
Fax: 817-858-3306
E-Mail: prcsales@uniden.com
Web: www.uniden.com

UNIsite
3450 Buschwood Park Dr Ste 250
Tampa FL 33618
813-915-3500; 800-UNISITE
Fax: 813-915-3660
E-Mail: sales@unisite.com
Web: www.unisite.com

United Telecom Sales (Unitel)
7310 Smoke Ranch Rd Ste D
Las Vegas NV 89128
702-360-3545
Fax: 702-360-3553
E-Mail: unitel_usa@msn.com

US Robotics
7770 N Frontage Rd MS IL29
Skokie IL 60077-2634

US Sitelease
PO Box 750324
Topeka KS 66675-0324
913-246-1771
Fax: 913-246-1997
E-Mail: jfhardees-sitelease.com
Web: www.us-sitelease.com

US Tower
1220 Martin St
Visalia CA 93291-9288
209-733-2438
Fax: 209-733-7194
E-Mail: sales@ustower.com
Web: www.ustower.com

US West Public Safety Group
5960 Inglewood Dr
Pleasanton CA 94588-8535
415-460-5500; 800-874-1856

USA Telecoms Services
901 Summit Walk Dr
Charlotte NC 28270-6964

UTC Service
1149 Connecticut Ave NW Ste 1110
Washington DC 20036-4302
202-331-9495; 800-900-4882
Fax: 202-331-7639

Utility Network Services
PO Box 850461
Richardson TX 75085-0461
972-234-5935

Utility Structures
PO Box 1630
Brookfield WI 53008-1630
414-252-4711; 800-966-4711
Fax: 414-252-4721

Utility Tower
PO Box 12369 3200 NW 38th St
Oklahoma City OK 73157-2369
405-946-5551
Fax: 405-947-8466

Interference Cancellation

Commercially
Available
Military
Anti-Jamming
Technology

Automatically
Suppress
Co-channel,
Adjacent Channel
& Broadband
Interference



CMA-2032 Antenna Signal Processor

CMC

CANADIAN MARCONI COMPANY

Tel: (613) 592-7440
Fax: (613) 592-7434
Email: asp@kan.marconi.ca
Web Site: www.marconi.ca
1-888-262-2032 (1-888-CMA-2032)

"Providing innovative solutions to Interference Problems"

Circle (87) on Fast Fact Card

TRANSMITTER LOCATION

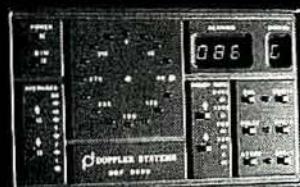


New fixed site direction finders provide 2 degree accuracy, and include software for triangulation from a central control site. Mobile versions also available covering 50MHz to 1 GHz

Doppler Systems Inc.

PO Box 2780 Carefree, AZ 85377
Tel: (602) 488-9755 Fax: (602) 488-1295
www.dopsys.com

European Marketing Director Denis Egan
PO Box 2, Seaton, Devon EX12 2YS England
Tel & Fax: 44 1297 62 56 90



Circle (88) on Fast Fact Card

V

Valmont/Microflect
W Highway 275 (PO Box 358)
Valley NE 68064-0358
402-359-2201 X6132; 800-825-6668
Fax: 402-359-5856
E-Mail: cgb@valmont.com
Web: www.valmont.com

ValueTronics International
1925 S Wright Blvd
Schaumburg IL 60193-4567
847-584-8258; 800-552-8258
Fax: 847-584-4329
E-Mail: sales@valuetronics.com
Web: www.valuetronics.com

VARTA
300 Executive Blvd
Elmsford NY 10523
914-592-2667; 800-431-2504

VCP International
PO Box 550999
Dallas TX 75355-0999
972-271-7474; 800-442-7001
Fax: 972-278-5981

♦ **Vega**
9900 E Baldwin Pl
El Monte CA 91731-2294
818-442-0782; 800-877-1771
Fax: 818-444-1342
E-Mail: vega_signal@earthlink.net
Web: www.vega-signaling.com

VersaTel Communications
PO Box 4012
Casper WY 82604-0012
307-265-9500; 800-456-5548
Fax: 307-266-3010

♦ **Vertex Radio Communications**
17210 Edwards Rd
Cerritos CA 90703-2426
562-404-2700; 800-2-VERTEX
Fax: 562-404-4828
Web: www.yaesu.com

Viziflex Seals
16 E Lafayette St
Hackensack NJ 07601-6831
201-487-8080; 800-30SEELS
Fax: 201-487-6637
E-Mail: viziflex@aol.com

Vir James
965 S Irving St
Denver CO 80219-3422
303-937-1900

Visiplex
1141-G Lake Cook Rd
Deerfield IL 60015-5235
847-405-0771
Fax: 847-405-0776
E-Mail: visiplex@visiplex.com
Web: www.visiplex.com

Visual Identification Products
PO Box 924647
Houston TX 77292-4647
713-895-1355; 800-950-4921
Fax: 713-895-1360

VLR Communications
2290 Charter Point Dr
Arlington Heights IL 60004-7222
847-870-8310; 800-369-8273
Fax: 847-255-5770
E-Mail: jweichel@home.com
Web: www.recorders-direct.com

♦ **VoCom Products**
731 W Lunt Ave
Schaumburg IL 60193-4412
847-923-9373; 800-872-6233
Fax: 847-923-9078
E-Mail: sales@vocomrf.com
Web: www.vocomrf.com

Voice & Data Radio
8801 W Flagler St #409
Miami FL 33174
305-885-6008
Fax: 305-885-0901

VXI
One Front St
Rollinsford NH 03869
603-742-2888; 800-742-8588
Fax: 603-742-5065
E-Mail: gale@vxicorp.com
Web: www.vxicorp.com

W

♦ **Wacom Products**
PO Box 21145
Waco TX 76702-1145
254-848-4435
Fax: 254-848-4209
E-Mail: wacom@wacomprod.com
Web: www.wacomprod.com

Wandel & Goltermann
1030 Swabia Ct
Research Triangle Pa NC 27703-8462
919-941-5730; 800-729-9441
Fax: 919-941-5751
E-Mail: solutions@wg.com
Web: www.wg.com

The Warner Group
5950 Canoga Ave Ste 600
Woodland Hills CA 91367
818-710-8855
Fax: 818-710-1467
E-Mail: twg@warnergroup.com
Web: www.warnergroup.com

Warner Electric (Bristol Plant)
383 Middle St
Bristol CT 06010-7438
860-585-4500; 800-787-3532
Fax: 860-582-3784
Web: www.warnemet.com/sev_main.html

Warning Systems
5858 Midnight Pass Rd
Sarasota FL 34242-2108
941-349-3689; 800-276-4347
Fax: 941-349-8678
E-Mail: wsceeo@aol.com
wsial@aol.com
Web: www.warningsystems.com

Watson Furniture Systems
12715 Miller Rd NE
Bainbridge Island WA 98110-4261
206-842-6135; 800-934-2145
Fax: 206-842-3290

Wavetek
5808 Churchman Bypass
Indianapolis IN 46203-6193
317-788-9351; 800-851-1202
Fax: 317-782-4607
E-Mail: wireless@wavetek.com
Web: www.wavetek.com

Wayne Kerr/Farnell
11 6th Rd
Woburn MA 01801-1744
617-938-8390; 800-933-9319
Fax: 617-933-9523

Webster Communications
115 Bellarmine
Rochester MI 48309-1204
248-375-0420; 800-521-2333
Fax: 248-375-0121

Wells Cargo
PO Box 728
Elkhart IN 46515-0728
219-264-9661; 800-348-7553
Fax: 219-264-5938
Web: www.wellscargo.com

Wenco
1224 NE Walnut St Ste 207
Roseburg OR 97470-5106
541-459-5292
Fax: 541-459-5294

Western Multiplex
1196 Borregas Ave
Sunnyvale CA 94089-1302
408-542-5200
Fax: 408-542-5300
Web: www.wirelessinterconnect.com

Wetec Electronics
1295 Highway 51 Bypass
Dyersburg TN 38024-2628
901-286-6275; 800-249-1250
Fax: 901-286-6438

Wheels
666 Garland Place
Des Plaines IL 60016-4788
847-699-7000 X4383
Fax: 847-699-6494

Whelen Engineering
Route 145/Winthrop Rd
Chester CT 06412-0684
860-526-9504; 800-63 SIREN
Fax: 860-526-4784
E-Mail: iowsales@whelen.com
Web: www.whelen.com

Wilmore Electronics
PO Box 1329
Hillsborough NC 27278-1329
919-732-9351
Fax: 919-732-9359

Winco Mfg
2460 Hwy I38 W
Oakland OR 97462
541-459-5292
Fax: 541-459-5294

The Winsted Corp
10901 Hampshire Ave S
Minneapolis MN 55438-2385
612-944-9050; 800-447-2257
Fax: 612-944-1546
E-Mail: racks@winsted.com
Web: www.winsted.com

Wireless Connection
9007 F St
Omaha NE 68127-1305
402-597-9770; 888-OFFWIRE
Fax: 402-597-9769
E-Mail: offwire@aol.com

Wireless Links
201 Rt 17 Ste 300
Rutherford NJ 07070
201-531-5906
Fax: 201-531-9795
E-Mail:
100264.2272@compuserve.com
Web: www.wlius.com

♦ **Wireless Technologies Group (Crystronics/Pager)**
2400 E Commercial Blvd Ste 630
Ft Lauderdale FL 33308-4026
954-491-9501
Fax: 954-491-8834
E-Mail: wireless@pageco.com
Web: www.pageco.com

Wisco International
690 W 28 St
Hialeah FL 33010-1218
305-888-1676
Fax: 305-887-1624
E-Mail: wisco@wiscointl.com
Web: www.wiscointl.com

♦ **C W Wolfe Communications**
1113 Central Ave
Billings MT 59102-5526
406-252-9220
Fax: 406-252-9617
E-Mail: cwwolfe@comcast.net

World Access/Wireless Div
181 Ballardvale St
Wilmington MA 01887-1024
978-694-3000
Fax: 978-694-4808
E-Mail: abuckley@waxs.com
Web: www.waxs.com

World Communications Group
1 Bethany Rd #76
Hazlet NJ 07730
732-888-1645; 888-888-8926
Fax: 732-888-2845
E-Mail: wcgus@worldnet.att.net

WPCS
PO Box 5099
Beaverton OR 97006
503-848-0160; 800-449-WPCS
Fax: 503-848-6249
E-Mail: info@wpcs.com
Web: www.wpcs.com

♦ **W&W Associates**
800 S Broadway
Hicksville NY 11801-5017
516-942-0011; 800-221-0732
Fax: 516-942-1944
E-Mail: w-wassoc@ix.netcom.com
Web: www.wwassociates.com

X

Xertex Technologies
1630 N 63rd St
Boulder CO 80301
303-442-6363
Fax: 303-442-5043
E-Mail: info@xertex.com
Web: www.xertex.com

Y

Yuasa Exide
2400 Bernville Rd
Reading PA 19605-9607
610-208-1991

Z

Z-Technology
PO Box 6806
Beaverton OR 97007-0806
503-614-9800
Fax: 503-614-9898
E-Mail: sales@ztechnology.com
Web: www.ztechnology.com

Zebryk Engineering
149 Chapin St
Southbridge MA 01550-2407
508-764-3855
Fax: 508-764-3716
E-Mail: jay@zebryk.com
Web: www.zebryk.com

♦ **Zetron**
PO Box 97004
Redmond WA 98073-9704
425-820-6363
Fax: 425-820-7031
E-Mail: zetron@zetron.com
Web: www.zetron.com

ZK Celltest
3180 De La Cruz Blvd Ste 201
Santa Clara CA 95054-2434
408-986-8080; 800-837-8235
Fax: 408-986-8178
E-Mail: zk@zkcell.com
Web: www.zkcell.com

Brand Names Directory

A-B

AC-PLUS-CSC Power Systems
ACS WIRELESS-CommuTech
ACTIVATOR VI-Advanced Charger Technology
ACTIVE EAR DEFENDER-CeoTronics
ADVANTAGE-Real Time Strategies
ALGO DATA RECORDERS-Algo Data Systems
AMTELCO DVX VOICE MAIL SYSTEMS-AMTELCO
AMTELCO INFINITY ALPHA DISPATCH SYSTEMS-AMTELCO
AMW -EDX Engineering
ARMOR-FLEX-Antenna Specialists
ATLASSOUND-Atlas/Soundolier
ATM ADAPTERS-IMT ComSys
AUTOFIND VEHICLE TRACKING-Corp Ten International
BANELEC-Benelec
BANELES-Benelec
BASE COMMANDER-Alen Telecom
BASEMAX-LBA Technology
BEAR HEADSETS-VXI
BIDDLE-AVO International
BLACK TALON-TCC Industries
BOARDMOUNT-Destin Thomas Products
BONDMASTER-Automated Production Equipment

C-D

CAILUBEMCL-CAIG Laboratories
CATS-Lockheed Martin Microwave-Narda
CDPD-SERIES-Comarco Wireless Technologies
CELL EXTENDER-Peninsula Wireless Communications
CELLCAT-MPR Teltech
CELLMASTER-Les Wallen USA
CELLREACH-Benelec
CELLUDAPT-RF Connectors
CELLULAR REPEATERS-Peninsula Wireless Communications
CELTRONIC BATTERY SAVERS-Wenco
CELTRONIC NI-CAD RECYCLERS-Wenco
CHANEXCOM-Futurecom Systems Group
CHARGER-Intelligent Technologies
CHARGER PLUS-Intelligent Technologies
CHIPMASTER-Automated Production Equipment
CMA-2032-Canadian Marconi
COMBIPOLE-LBA Technology
COMMSHOP-Direct Communications International
CONTACT COM-CeoTronics
CONTAINERVAN-Mobile International
CONVEX-Simulcast Solutions
CROSSPATH T1 MINI-DCS-ADC Kentrox
CUSHMAN-RF Imaging & Communications
CUSTOMER CALL-Service Alert
CVR-EDX Engineering
CYCLON-Hawker Energy Products
D-NET-E F Johnson
DATACELL MOBILE DATA BASE STATION-Steinbrecher
DATALINK-ElectroCom Communication Systems

DATAPARTNER-ElectroCom Communication Systems
DATATOUCH-DataBurst Technologies
DEOXIT-CAIG Laboratories
DETUNIPOLE-LBA Technology
DIGITAL VOICE ACQUISITION RECORDER (DVR-8)-JEI
Communications Recording System
DIVERSITY MASTER-Alen Telecom
DPE-Ericsson
DTR-8500-AEMC Instruments
DURA-CON-Antenna Specialists
DURA-FLEX-Antenna Specialists
DURACELL-Battery Network
DURACOMM-DuraComm
DURUS-Bee Electronics

E-F

EAR-MIKE-Telex Communications
EASYTALK-Nady Systems
ECCOSHIELD-Emerson & Cuming Microwave Products
ECCOSORB-Emerson & Cuming Microwave Products
ECCOSTOCK-Emerson & Cuming Microwave Products
ECLIPSE BASE STATIONS-RF Technology
ECLIPSE REPEATERS-RF Technology
ECLIPSE RF LINKS-RF Technology
EDACS-Ericsson
EDX SIGNAL PRO-EDX Engineering
EIRP-APREL Laboratories
EMC-DataBurst Technologies
ENERGIZER-Battery Network
ENHANCED SERVICES PLATFORM-Enhanced Systems
EVENTIDE VOIDE LOGGING RECORDERS-Triton Electronics
EXPORTVAN-Mobile International
FAST PAGE-Indym
FIRELINE-SONIK Technologies
FLEXWELL-RFS Cablewave Systems
FM CUBED-SpaceCom Systems
FM SQUARED-SpaceCom Systems
FMSR-EDX Engineering
FORM 600 MADE PAINLESS-Brown & Schwaninger
FRAUDWATCH-Subscriber Computing

G-H

GENESIS-Hawker Energy Products
GENII-Comarco Wireless Technologies
GINA-GRE America
GN NETCOM-CommuTech
GOLDLINK-Atlas/Soundolier
GOTALK-GoComm Wireless
GRIPPER NIPPER-RF Connectors
HANDS-OFF-Enhanced Systems
HARD HAT-Antenna Specialists
HAWKER XT-Hawker Energy Products
HELLO!-Enhanced Systems
HYPERCUBED-SpaceCom Systems

I-J

IDA1000-Gai-Tronics

IDR1000-Gai-Tronics
ILD1000-Gai-Tronics
ILD2000-Gai-Tronics
INFINITY-Ericsson
INFOLINK-2000-Linktronic Systems
INTELLICELL-ArrayComm
INTELLILINK-Real Time Strategies
INTELLIPAGE-Real Time Strategies
INTERCEPTOR-Statistical Control Systems
INTERCEPTOR MACH 2-Statistical Control Systems
IPE-Ericsson
IPE2500-Gai-Tronics
IQ FIVE-Intelligent Technologies
IQ PLUS-Intelligent Technologies
IQ TEN-Intelligent Technologies
IRC3000-Gai-Tronics
ISD-PageTap
ITA2000-Gai-Tronics
ITI6000-Gai-Tronics
ITR1000-Gai-Tronics
ITR2000-Gai-Tronics
ITR2300-Gai-Tronics
JAVELIN-Spilsbury Communications
JOTTO DESK-Jotto Desk

K-L

KABAND (20/30 GHZ) TRANSCEIVERS-IMT ComSys
KALMUS-Benelec
KING-Communication Engineers
KITCHEN CALL-Service Alert
KPC-Ericsson
LARSEN-Inwave
LAYERED BIOMETRIC VERIFICATION (LBV) SERVER-Keyware Technologies
LIBERTY SERIES-TCC Industries
LMDS-IMT ComSys
LOPRO MOBILE ANTENNA-Northpoint Communications Products
LYNX.SC-Western Multiplex

M-N

MAGNACOM-Telex Communications
MAGNAROPE-Telex Communications
MAINTAINOR-Advanced Charger Technology
MAXITEL-Telepoint
MCS -EDX Engineering
MEDIA ACCESS PRO-BIA Research
MEDIA WEB SEARCH-BIA Research
MESSAGE LINK-SpectraLink
MESSAGE SENDER-GoComm Wireless
MICROVAN-Mobile International
MICROWAVE MICROCELL-Peninsula Wireless Communications
MINICELL MULTI-MODE BASE STATION-Steinbrecher
MOBEXCOM-Futurecom Systems Group
MOBIL-TENNA-RF Products
MOBINAV-DataBurst Technologies
MODULATOR-Les Wallen USA
MODULINK-Shure Brothers
MOSAIC-Antenna Specialists
MSITE-EDX Engineering
NETWORKREADINESS-Comarco Wireless Technologies

NEW250-SERIES—Comarco Wireless Technologies
NOISEBUSTER0—Noise Cancellation Technologies
NUMERO-UNO—GoComm Wireless

O-P

OMNI-C-RF Products
OMNI-J-RF Products
OMNI-PURPOSE—Atlas/Soundolier
ON-GLASS—Antenna Specialists
ONGUARD—ATX Research
OPENMEDIA CELLULAR PREPAID—Open Development
OPENMEDIA ENHANCED SERV PLATFORM—Open Development
OPENMEDIA PREPAID—Open Development
PACKETCLUSTER PATROL—Cerulean Technology
PACKETCLUSTER RESCUE—Cerulean Technology
PAGEKOM—Atlas/Soundolier
PAGELINK-2000—Linktronic Systems
PAGENTRY—Real Time Strategies
PAGEPRO—SONIK Technologies
PAGEPRO MESSENGER—SONIK Technologies
PAGESITTER—Statistical Control Systems
PARMARLOW—TwitCo Distributing
PARROTT HEADSETS—VXI
PC PAGE—Service Alert
PCF-MTS TERMINAL—Pacific Circuit Design
PERSONAL ACTIVATOR—Advanced Charger Technology

PHONELINK—Telemobile
PLANET—Mobile Systems International
PMP—EDX Engineering
POP PAGE—Statistical Control Systems
POP-90—EDX Engineering
PORTA-TENNA—RF Products
PORTAPAK—CSC Power Systems
POWERPAK—CSC Power Systems
POWERTOPPER—LBA Technology
PRESTIGE—Audiovox
PRIMERO—GoComm Wireless
PRO-FLEX—Antenna Specialists
PROACTIVE—Noise Cancellation Technologies
PROFESSIONAL CAR PHONE ACCESSORIES—Kensington & Icknield
PROGOLD—CAIG Laboratories
PT-8—PageTap
PUSH BUTTON PAGING—Service Alert
PYRAMID COMMUNICATIONS—Pyramid Communications

SURGE MASTER II—MCG Electronics
SYSTEM 90—Intelligent Technologies

T

TABLE PAGING—Service Alert Inc
TAP TERRAIN ANALYSIS PACKAGE—SoftWright
TAPLINK—PageTap
TENMA TEST EQUIPMENT—MCM Electronics
TERRN—EDX Engineering
THE CONSOLIDATOR—Havis Shields Equipment
THUNDRA PRO—Atlas/Soundolier
TIME LOG (MODEL 204)—JEI Communications Recording System
TOUCHNAV—DataBurst Technologies
TPATH—EDX Engineering
TRAVEL-TENNA—RF Products
TRCC—TELEPHONE/RADIO COMMUNICATION CONSOLE—Positron
TREE CELLS—FWT
TRIPP-LITE—CommuniTech
TRUE MEGOHMMETERS—AEMC Instruments
TT-4—PageTap
TUNIPOLE—LBA Technology
TVSR—EDX Engineering
TWB—Amphenol
TWOTEXT—GoComm Wireless
TXL—Amphenol

U-V

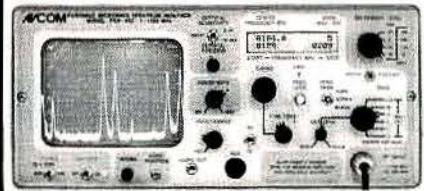
ULTRA PORTABLE—Comverse Information Systems
ULTRA SYSTEM—Comverse Information Systems
ULTRA TOWER—Comverse Information Systems
UNEX—CommuniTech
UNICABLE—RF Connectors
UNIDAPT—RF Connectors
UNISTAR—UNIsite
UNITEL—Telepoint
UNIVAN—Mobile International
US ROBOTICS—CommuniTech
VARI-TAP—Atlas/Soundolier
VERSA CABINET—Utility Structures
VERSA SHELTER—Utility Structures
VERSA VAULT—Utility Structures
VERTI-TENNA—RF Products
VMC—DataBurst Technologies
VOICE CONTROL—Atlas/Soundolier
VOICE/TONE—Atlas/Soundolier
VXI—CommuniTech

W-Z

WAVEPLEX—World Access Wireless Div
WAVETECH/STABILOCK—RF Imaging & Communications
WAVSTAR—Simulcast Solutions
WEATHER EAGLE—Thunder Eagle
WILL BURT—Benelec
WINAVL—LOCSYS
WIRE COM—CeoTronics
WIRELESS TELEPHONE—SpectraLink
WIRELESS TELEPHONE SYSTEM—SpectraLink
XIT—Lyncole XIT Grounding
ZAP TRAP—Les Wallen USA

NEW MULTIFUNCTION LCD AVCOM's PSA-65C

Portable Spectrum Analyzer 1-1250 MHz In One Sweep!!



AVCOM's newest Portable Microwave Spectrum Analyzer, model **PSA-65C**, has a frequency range from less than 1 MHz to 1250 MHz with a sensitivity greater than -95 dBm at narrow spans, for the low price of \$ 2930.

AVCOM's new **PSA-65C** is a low cost general purpose spectrum analyzer that's loaded with standard features including FM audio demodulator, AM detector and digital frequency lock. The **PSA-65C** covers frequencies thru 1250 MHz in one sweep. The **PSA-65C** is ideally suited for 2-way radio, cellular, cable, satellite, LAN, surveillance, educational, production and R&D work. Options include new 1250 MHz frequency extenders, BNG-1000A tracking (noise) generator, log periodic antennas, carrying case (AVSAC), and more.

Visit our web site at
www.AVCOMofVA.com

AVCOM

500 SOUTHLAKE BLVD
RICHMOND, VA 23236
Phone: 804-794-2500
FAX: 804-794-8284
USA

Bringing High Technology Down to Earth
Phone, fax or write for more information or to order.

Circle (89) on Fast Fact Card

index to 1998 features

1998 Author Index

Andrescu, Paul and Robert Perelman, Eupen Cable USA, "Connector Selection Design Criteria," November, page 22.

Arcuri, Dominick, Ericsson Private Radio Systems, "Improving Digital Radio Voice Quality," October, page 34.

Ashley, Jeff
"Microwave Path Design: The Basics, Part 1," May, page 26.
"Microwave Path Design: The Basics, Part 2," June, page 28.
"Microwave Path Design: The Basics, Part 3," July, page 22.
"Microwave Path Designs: The Basics, Part 4," August, page 26.
"Remote Testing of EDACS Trunking Systems," November, page 36.

Ball, Michael, PageTek, "Paging Infrastructure: The Agent, the Manager and the MIB," April, page 74.

Bigrigg, Douglas, Daniels Electronics, "Repeater Reliability," October, page 28.

Bishop, Don, Editorial Director
"Resolving Digital-Analog, ESMR-SMR Interference," March, page 10.
"Fred M. Link: 'Goodwill Ambassador,'" August, page 22.

Cayton, Marty, Mobex, "Communications Outsourcing to Utility Companies," June, page 22.

Chandler, Nikki, Associate Editor, "GPS/AVL Brings Out the Best in Business," October, page 22.

Church, H.V., "Everybody Wants the Top of the Tower," July, page 30.

Cory, Terry S., Cameron Crum and Ramsey Decker, Wave Concepts International, "2G RF Tools Optimize Capacity in PCS Networks," October, page 40.

Crofut, Walter, L3 Communications Narda East, "Remote Monitoring of Wireless Base Stations," June, page 10.

Denton, Tim and Miranda Stewart, RSI, "OSHA and the 1996 Telecommunications Act," July, page 10.

Ellis, E. Kirk, BellSouth Mobility, "Improving PCS Reliability Through Cell Frequency Management," September, page 38.

Enwistle, Vaughn, Zetron, "It's 2:30 a.m.; Do You Know Where Your Paging System Is?" May, page 22.

Haas, Klaus and Gregor Veithen, Eupen A.G., "Radiating Cable Improves In-building Wireless," May, page 34.

Kaercher, Kathleen, Brown and Schwaninger, "Here We Go Again ... The Upcoming 220MHz Auction," March, page 24.

Keckler, D.A., Features Editor
"What's Goin' On?" March, page 18.
"UHF Trunking: Promised Land?" April, page 28.
"In Pursuit of Interoperability," August, page 42.
"Making the Machine Smarter," November, page 16.

Kinley, Harold, South Carolina Forestry Commission
["Technically Speaking" column]
"Power Supplies for Communications Servicing," January, page 8.
"SWR By Any Other Name...," February, page 8.
"Conversion for RF Exposure Measurements," March, page 8.
"Tower-top Amplifiers—Pros and Cons," April, page 8.
"Electromagnetic Compatibility vs. Mobile Radio Installations," May, page 8.
"Using Crystal Filters at VHF High Band," June, page 8.
"Looking Back...," July, page 8.
"Continuing EMC Issues," August, page 56.
"The Backup Plan (Plan B?)," September, page 48.
"The Backup Plan (Plan B?) Part II," October, page 52.
"Maxtrac Repeater Combo" November, page 39.

Kobielus, James and Andrew Woessner, LCC International, "Benchmarking Tools Enhance Wireless Test and Measurement for Competitive Analysis," April, page 16.

Koehler, Donald E., University of Alaska
"Gimme Shelter: Alternatives for Housing Remote Equipment," May, page 10.
"PCS: A Threat to SMR?" September, page 34.

Leger, Don and Don Calais, Two-Way Communications, "Tower Foundations Made Easy," July, page 16.

Major, Michael
"Slashing Response Time," January, page 10.
"Advances in Police Tactical Communication," May, page 16.
"The Explosive Growth of Satellite Communications," October, page 45.

McGinnis, Henry J., Landmark Towers, "Tower Augmentation," February, page 10.

MRT Staff
"Coaxial Cable for Wireless Communications," January, page 24.
"Service Monitors," February, page 44.

"Time is Tissue," August, page 40.

Nagle, Don, HTE, "Virginia Agency Speeds Queries and Dispatch with Mobile Data," June, page 36.

Osterloh, Chris, Glenayre, "System Design Considerations for High-speed Paging," January, page 28.

Pickett, Dave, Harris County, "Communications Surge Protection: From 'Zip' to 'Zap,'" April, page 10.

Reid, Emily, Editorial Assistant, "Y2K: Back to the Future, or Forward into the Past?" August, page 53.

Sawtek, "Specifying a Custom SAW Filter," March, page 32.

Schwaninger, Robert H. Jr., Brown and Schwaninger, "Due Process Goes South on Deal with North," September, page 42.

Schwaninger, Robert H. Jr., Brown and Schwaninger
["Regulating Technology" column (renamed "In the Public Interest" in August 1998)]
"No Crystal Ball Required," January, page 42.
"Do It for Reed," February, page 52.
"The Virtual Vacuum," March, page 43.
"Gettin' Ready for Vegas," April, page 82.
"Toward Gentility," May, page 54.
"Kennard's TIN Star," June, page 50.
"Shifting Tides at the Top," July, page 40.
"Paved with Good Intentions," August, page 10.
"Son of Sam," September, page 14.
"Barbarians at the Fund," October, page 16.
"The Tower Industry: Heading to Hype," November, page 12.

Seethaler, William, Telewave, "A Golden Opportunity at Round Mountain," August, page 16.

Simon, Don and Jack Daniel, Mountain States Marketing and The Jack Daniel Company, "Reinventing Antennas," August, page 34.

Singer, Andrew, Celwave, "Optimizing Performance and Maximizing Capacity in CDMA Systems," September, page 18.

Souissi, Slim, Stephen Sek and Casey Hill, Motorola Messaging Systems Product Group, "Simulcast Design for the Flex Paging Protocol," November, page 28.

Staehler, Dwight, Celwave, "Some Criteria for Evaluating Antennas," September, page 19.

Steinberg, Jody and Joe Pendergrass, Advanced Charger Technology, "Charger Technology Uses Improved Ion Balancing," February, page 24.

Stuard, Doug, Tellabs, "Voice Quality in PCS and Cellular Networks: Eliminating Echo," September, page 24.

Terborgh, Eliot, SmarTrunk Systems, "Overlay Scan-based Trunking Below 800MHz," January, page 16.

Tucker, Jim, UltraTek, "Cellular Network Emulation for Specialized Mobile Radio," February, page 36.

Worthman, Ernest, Contributing Editor, "The Lives and Times of MRT," May, page 38.

1998 Subject Index

Amplifiers

"Technically Speaking: Tower-top Amplifiers—Pros and Cons," Harold Kinley, South Carolina Forestry Commission, April, page 8.

Base station antennas

"Reinventing Antennas," Don Simon, Mountain States Marketing, and Jack Daniel, The Jack Daniel Company, August, page 34.

"Some Criteria for Evaluating Antennas," Dwight Staehler, Celwave, September, page 19.

Batteries

"Charger Technology Uses Improved Ion Balancing," Jody Steinberg and Joe Pendergrass, Advanced Charger Technology, February, page 24.

Chronology

"The Lives and Times of MRT," Ernest Worthman, Contributing Editor, May, page 38.

Coaxial cable

"Coaxial Cable for Wireless Communications," MRT Staff, January, page 24.

"Radiating Cable Improves In-building Wireless," Klaus Haas and Gregor Veithen, Eupen A.G., May, page 34.

Connectors

"Connector Selection Design Criteria," Paul Andreescu and Robert Perelman, Eupen Cable USA, November, page 22.

1998 Subject Index (continued)

Dispatch

"Slashing Response Time," Michael Major, January, page 10.

Echo cancellation

"Voice Quality in PCS and Cellular Networks: Eliminating Echo," Doug Stuard, Tellabs, September, page 24.

Electromagnetic compatibility

"Technically Speaking: Electromagnetic Compatibility vs. Mobile Radio Installations," Harold Kinley, South Carolina Forestry Commission, May, page 8.

FCC and regulation

"Due Process Goes South on Deal with North," Robert H. Schwaninger Jr., Brown and Schwaninger, September, page 42.

"Here We Go Again ... The Upcoming 220MHz Auction," Kathleen Kaercher, Brown and Schwaninger, March, page 24.

"In the Public Interest: Barbarians at the Fund," Robert H. Schwaninger Jr., Brown and Schwaninger, October, page 16.

"In the Public Interest: Paved with Good Intentions," Robert H. Schwaninger Jr., Brown and Schwaninger, August, page 10.

"In the Public Interest: Son of Sam," Robert H. Schwaninger Jr., Brown and Schwaninger, September, page 14.

"In the Public Interest: The Tower Industry: Heading to Hype," Robert H. Schwaninger Jr., Brown and Schwaninger, November, page 12.

"Regulating Technology: Do It for Reed," Robert H. Schwaninger Jr., Brown and Schwaninger, February, page 52.

"Regulating Technology: Kennard's TIN Star," Robert H. Schwaninger Jr., Brown and Schwaninger, June, page 50.

"Regulating Technology: No Crystal Ball Required," Robert H. Schwaninger Jr., Brown and Schwaninger, January, page 42.

"Regulating Technology: Shifting Tides at the Top," Robert H. Schwaninger Jr., Brown and Schwaninger, July, page 40.

"Regulating Technology: Toward Gentility," Robert H. Schwaninger Jr., Brown and Schwaninger, May, page 54.

"Regulating Technology: The Virtual Vacuum," Robert H. Schwaninger Jr., Brown and Schwaninger, March, page 43.

Filters

"Specifying a Custom SAW Filter," Sawtek, March, page 32.

"Technically Speaking: Using Crystal Filters at VHF High Band," Harold Kinley, South Carolina Forestry Commission, June, page 8.

Frequency management

"Improving PCS Reliability Through Cell Frequency Management," E. Kirk Ellis, BellSouth Mobility, September, page 38.

Global positioning system

"GPS/AVL Brings Out the Best in Business," Nikki Chandler, Associate Editor, October, page 22.

Impedance

"Technically Speaking: SWR By Any Other Name...," Harold Kinley, South Carolina Forestry Commission February, page 8.

Interference

"Resolving Digital-Analog, ESMR-SMR Interference," Don Bishop, March, page 10.

Lightning and surge protection

"The Backup Plan (Plan B)," Harold Kinley, South Carolina Forestry Commission, September, page 48.

"The Backup Plan (Plan B) Part II," Harold Kinley, South Carolina Forestry Commission, October, page 52.

"Communications Surge Protection: From 'Zip' to 'Zap,'" Dave Pickett, Harris County, April, page 10.

Link, Fred

"Fred M. Link: 'Goodwill Ambassador,'" Don Bishop, Editorial Director, August, page 22.

Microwave

"Microwave Path Design: The Basics, Part 1," Jeff Ashley, May, page 26.

"Microwave Path Design: The Basics, Part 2," Jeff Ashley, June, page 28.

"Microwave Path Design: The Basics, Part 3," Jeff Ashley, July, page 22.

"Microwave Path Designs: The Basics, Part 4," Jeff Ashley, August, page 26.

Mobile data

"Virginia Agency Speeds Queries and Dispatch with Mobile Data," Don Nagle, HTE, June, page 36.

Optimization

"Optimizing Performance and Maximizing Capacity in CDMA Systems," Andrew Singer, Celwave, September, page 18.

"2G RF Tools Optimize Capacity in PCS Networks," Terry S. Cory, Cameron Crum and Ramsey Decker, Wave Concepts International, October, page 40.

Paging

"It's 2:30 a.m.; Do You Know Where Your Paging System Is?" Vaughn Entwistle, Zetron, May, page 22.

"Paging Infrastructure: The Agent, the Manager and the MIB," Michael Ball, PageTek, April, page 74.

"Simulcast Design for the Flex Paging Protocol," Slim Souissi, Stephen Sek and Casey Hill, Motorola Messaging Systems Product Group, November, page 28.

"System Design Considerations for High-speed Paging," Chris Osterloh, Glenayre, January, page 28.

Power supplies

"Technically Speaking: Looking Back...," Harold Kinley, South Carolina Forestry Commission, July, page 8.

"Technically Speaking: Power Supplies for Communications Servicing," Harold Kinley, South Carolina Forestry Commission, January, page 8.

Public safety

"Advances in Police Tactical Communication," Michael Major, May, page 16.

"Communications Surge Protection: From 'Zip' to 'Zap,'" Dave Pickett, Harris County, April, page 10.

"A Golden Opportunity at Round Mountain," William Seethaler, Telewave, August, page 16.

"GPS/AVL Brings Out the Best in Business," Nikki Chandler, Associate Editor, October, page 22.

"In Pursuit of Interoperability," D.A. Keckler, Features Editor, August, page 42.

"Slashing Response Time," Michael Major, January, page 10.

"Time is Tissue," MRT Staff, August, page 40.

"Virginia Agency Speeds Queries and Dispatch with Mobile Data," Don Nagle, HTE, June, page 36.

Radiation

"Technically Speaking: Conversion for RF Exposure Measurements," Harold Kinley, South Carolina Forestry Commission, March, page 8.

"OSHA and the 1996 Telecommunications Act," Tim Denton and Miranda Stewart, RSI, July, page 10.

Remote monitoring

"Remote Monitoring of Wireless Base Stations," Walter Croft, L3 Communications Narda East, June, page 10.

"What's Goin' On?" D.A. Keckler, Features Editor, March, page 18.

Repeaters

"Repeater Reliability," Douglas Bigrigg, Daniels Electronics, October, page 28.

Satellite communications

"The Explosive Growth of Satellite Communications," Michael Major, October, page 45.

Shelters

"Gimme Shelter: Alternatives for Housing Remote Equipment," Donald Koehler, University of Alaska, May, page 10.

Site Security

"What's Goin' On?" D.A. Keckler, Features Editor, March, page 18.

SMR

"Cellular Network Emulation for Specialized Mobile Radio," Jim Tucker, UltraTek, February, page 36.

"PCS: A Threat to SMR?" Donald E. Koehler, University of Alaska, September, page 34.

Test equipment

"Service Monitors," MRT Staff, February, page 44.

"Benchmarking Tools Enhance Wireless Test and Measurement for Competitive Analysis," James Kobielski and Andrew Woessner, LCC International, April, page 16.

"Making the Machine Smarter," David Keckler, Features Editor, November, page 16.

"Remote Testing of EDACS Trunking Systems," Jeff Ashley, November, page 36.

Towers

"Tower Augmentation," Henry J. McGinnis, Landmark Towers, February, page 10.

"Tower Foundations Made Easy," Don Leger and Don Calais, Two-Way Communications, July, page 16.

"Everybody Wants the Top of the Tower," H. V. Church, July, page 30.

Trade Associations

"Regulating Technology: Getting Ready for Vegas," Robert H. Schwaninger Jr., Brown and Schwaninger, April, page 82.

Trunking

"Overlay Scan-based Trunking Below 800MHz," Eliot Terborgh, SmarTrunk Systems, January, page 16.

"UHF Trunking: Promised Land?" D.A. Keckler, Features Editor, April, page 28.

Utility Communications

"Communications Outsourcing to Utility Companies," Marty Cayton, Mobex, June, page 22.

Vocoders

"Improving Digital Radio Voice Quality," Dominick Arcuri, Ericsson Private Radio Systems, October, page 34.

Y2K

"Y2K: Back to the Future, or Forward into the Past?" Emily Reid, Editorial Assistant, August, page 53.

MRT



Dawn Rhoden
Classified Advertising
Manager

Reserve your spot in the next issue!

Phone: 913-967-1861

800-347-9375

Fax: 913-967-1735

Mail: 9800 Metcalf Ave.,
Overland Park, KS 66212

Category Index

Accessories	119
Business Opportunity	103
Computer Software	116-117
Employment	103-105
Equipment For Sale	105-116
Paging	115-116
Professional Consulting Services	119
Professional Services	103
Rentals	116
Repair Services	118
Services	119
Tower Space	119

professional services

ALCOM

David C. Allen

System Consulting & Technical Services

P.O. Box 817 (208) 939-6950
Eagle, ID 83616 davida@primenet.com

FREDERICK G. GRIFFIN, P.C.



3229 Waterlick Road
Lynchburg, VA 24502
(804) 237-2044

NATIONWIDE COMMUNICATIONS CONSULTING
Mobile Radio, Microwave, E9-1-1,
CAD, Paging, LAN,
Dispatch Communications Centers
Multi Site Propagation Analysis

MCCON

Mobile Communications Consulting

S.R. McConoughey, P.E.
Principal

13017 Chestnut Oak Drive
Gaithersburg, MD 20878 (301) 916-2837

 **OMNICOM, Inc.**
COMMUNICATIONS ENGINEERING

GENE A. BUZZI
PRESIDENT

930 THOMASVILLE ROAD, SUITE 200
TALLAHASSEE, FLORIDA 32303
PHONE: (850) 224-4451 • FAX: (850) 224-3059
E-mail: omnicom@polaris.net

PORTA-TECH PORTABLE TECHNICAL SERVICE, INC.

121 Crowell Lane • Lynchburg, VA 24502

 FACTORY TRAINED
TECHNICIANS
FOR QUALITY SERVICE

GE Portable Radio Service Depot
Factory Approved Nationwide
• Current Product Lines
• Voice Guard Certified
• Public Service Trunking
• Surface Mount Technology
(804) 239-3049

PROJECTS UNLIMITED INTERNATIONAL

Specializing in Communications Solutions for Developing Countries
International and Domestic Consulting Services

- Voice/Data HF/VHF/UHF/Spread Spectrum
- Fax & Internet email by HF radio
- Manufacturer Support
- Installation/Training

P.O. Box 146, Twin Peaks, California 92391 USA
909-336-5216 909-336-5217 Fax
email: projunltd@compuserve.com
<http://ourworld.compuserve.com/homepages/projunltd/>

HERB SACHS, CONSULTING

Specialist in Public Safety Communications

P.O. Box 729
Bowie, MD 20715
301-464-4268

GE PORTABLE SERVICE

- FAST TURN
- WARRANTY
- \$48.00 hr./2 hr. MAX
- PARTS GE LIST
- RETURN UPS PAID



Smith Communications Service
2121 W. Parrish Ave., Owensboro, KY 42301
502-683-0936

TROTT COMMUNICATIONS GROUP

RAYMOND C. TROTT, P.E.
Chairman

1425 Greenway Drive, Suite 350
Irving, Texas 75038
972/580-1911 • Fax: 972/580-0641



**Fishing for new
customers?**

**Try MRT
Classifieds!**

business opportunity

Business Opportunity

Motorola Full-Line Dealer and MSS. Tower sites and community repeaters. Southeast Colorado. 25 years in same location-OWNER retiring.

719-336-7831 - Jim Gill

employment

Arch

PAGING TECHNICIANS

Large National Paging Company seeks additional Technicians for the Ohio area. Minimum 2 years paging terminal and/or transmitter experience required, with FCC or PCIA certification preferred.

We offer excellent benefits, including 401K, Stock option plan. For consideration, send resume to:

ARCH COMMUNICATIONS

Warren Olson, Technical Manager
3655 Hauck Rd., Cincinnati, OH 45241

FOR SALE

Paging business with sites in Louisville, LaGrange & Lexington, Kentucky. 450MC, part 22. Mail: Radio-PO Box 91388, Louisville, KY 40291, or pageky.com

employment

COMMUNICATIONS ELECTRICIAN

The City of Los Angeles has an exceptional opportunity for individuals with four years of full-time paid experience in the installation, repair, and construction of:

MICROWAVE

Farinon digital and analog microwave systems, channel bank equipment (Siemens, NEC, Alcatel), video microwave, and Fireboat radar.

MOTOROLA

Base stations and repeaters, mobiles, and portables. Motorola simulcast systems.

ERICSSON, GE

EDACS simulcast trunking systems, Master II and Master III base stations, mobiles, and portables.

DISPATCH SYSTEMS

Troubleshooting and maintaining Emergency Dispatch Systems, involving 911 telephone, radio and computer aided dispatch (CAD). Monitoring and analyzing software and hardware problems related to the dispatch system. Maintenance involves device level repair of various equipment including microcontrollers, PC work stations, printers, modems, logging recorders, analog and digital audio equipment, and Mobile Data Terminal (MDT) related equipment. Candidates are required to interface with field technicians and engineers in resolution of problems.

We offer a full range of benefits. **THE FLAT RATED SALARY** for most positions in the City is \$4149 a month.

REQUIREMENTS

1. Four years of full time experience in the construction, installation and repair of a wide variety of Electronics and communications equipment.
2. Successful completion of a two-year program in electronics at a recognized college or trade school. **OR**
3. Successful completion of a military electronics technician course of 24 weeks or longer.

Application forms may be obtained in: Room 100, Personnel Building, 700 East Temple Street, Los Angeles, CA 90012. OR call (213) 847-9240.

AN EQUAL OPPORTUNITY-AFFIRMATIVE ACTION EMPLOYER

COMMUNICATIONS TECHNICIAN

30K to 38K depending on qualifications; plus profit sharing and other benefits. Positions open in Ukiah & Eureka areas of Northern California. Must have FCC or Naber certification. Two years experience working with Motorola, trunking, LTR, microwave would be a plus.



MASTERSON COMMUNICATIONS, INC.
2081 Wellmar Drive
Ukiah, CA 95482
FAX: 707-462-9749

TWO WAY RADIO TECH/SALES

40-year-old GROWING Multi-line Dealer with multiple facilities in Indiana, Kentucky and Arkansas has immediate need for Mobile & Portable Two-Way Technicians and Sales Staff with 2 or more years of experience on Motorola, G.E., Kenwood, Standard, LTR or similar equipment. FCC or NABER Certified. Full benefits, competitive wages, incentive bonus package, excellent working conditions and advancement opportunities.

Send resume to:

1-800-288-2430 or FAX: 1-317-248-0118

COMMUNICATIONS MAINTENANCE INC.

5601 Progress Road
Indianapolis, IN 46241
Attn: Personnel Dept.

Use COLOR to make your ad STAND OUT!

First

communications

Our growing company is the dealer/distributor for MOTOROLA communications products in several SE markets. We specialize in Two-way radio, SMR, Paging and Cellular. We are looking to fill several positions created by our growth. We seek highly motivated individuals who want a rewarding career with an industry leader. The following opportunities are full-time positions with excellent benefits.

- Division Manager
- Radio Technician

Please specify your position of interest and send resume to:

FIRST COMMUNICATIONS, INC.
Attention: Career Opportunities
P.O. Box 2234, Tallahassee, FL 32316
Fax: 850-575-2870
OR

For details, call Jennifer Ford, Mon-Fri between 2 PM-4 PM at 850-576-7113.

WIRELESS SYSTEMS SUPERVISOR

The City of Austin is currently seeking an individual to perform wireless systems engineering duties and supervision. This position requires complex radio systems design and analysis. The position will also supervise field service employees tasked with installing and maintaining the City of Austin's Public Safety Radio Communications Systems which include: VHF, UHF conventional radio systems, microwave radio systems and CAD and MDT systems. The person in this position will be a technical advisor on City wireless communications issues.

A Bachelor's degree in Electrical Engineering or a related field, plus four years of experience in engineering design, planning and project management is required. Knowledge of FCC rules and regulations is required.

Salary commensurate with experience. Great benefits! Join us in our vision to make Austin the most livable community in the country! Position will remain open until filled, but no later than December 31st. Resumes must include Requisition Number: #7400000096. Fax to Diane Little at 512-927-3280 OR mail to: *The City of Austin, 6301 Harold Court, Austin, TX 78721, Attn: Diane Little*. You may also contact Chuck Woods, Radio Communications Manager at 512-927-3288 or Diane Little at 512-927-3270.

The City of Austin is committed to compliance with the Americans with Disabilities Act. Reasonable Accommodations will be provided upon request. Equal Opportunity/Affirmative Action Employer.

RADIO SYSTEMS TECHNICAL COORDINATOR

Volusia County Government, located in DeLand, Florida, is currently seeking candidates for the position of Radio Systems Technical Coordinator. Major functions of this position include professional, technical work developing, analyzing and enhancing the county's radio communications systems including the 800 MHz system.

Salary: \$29,586-\$44,380. Minimum Qualifications:

Bachelor's degree in Engineering, Computer Science or related field with emphasis in computer networking and radio communications and one year experience in radio frequency maintenance, trunked and conventional radio technology. Ericsson EDACS master technician certification highly desirable. A comparable amount of education, training and experience may be substituted for the minimum qualifications. Interested applicants must submit a Volusia County application. **Closes:** Open Until Filled. **Apply:** County of Volusia Personnel Services, 123 W. Indiana Ave., DeLand, FL 32720-4607. Applications available at website <http://Volusia.org> or at Volusia County Libraries or call (904) 736-5951, 423-3300 or 257-6000. EOE/AA. Veterans preference pursuant to State law.

TWO-WAY RADIO TECHNICIANS

Motorola MSS/Full Line Dealer in Central Florida has openings for bench and field techs. Motorola experience preferred. FCC and/or Naber required. Send resume with salary requirements to:

Tri-Co Communications Inc.
Attn: Brad Barber
4651-B NW 6th St.
Gainesville, FL 32609
Ph: 800-228-8501
Fax: 352-377-9549

employment

R A D I O C O M M U N I C A T I O N S P R O S

MTA Metro-North Railroad, one of the nation's most advanced and progressive railroads, has excellent opportunities in our Communications and Signals Department for the following professionals:

ENGINEER-RADIO CONTROL

You'll assist the Assistant Director of Radio Systems in the maintenance, installation and management of Transportation, Police, and Maintenance of Way Radio control systems, Public Address and Visual Information Systems. Responsibilities also include establishing maintenance procedures and providing direction for software installation procedures for radio and public address control systems; developing and maintaining shop databases for maintenance records and inventory control; managing radio shop schedules and maintenance cycles; functioning as liaison between communication/user departments to insure optimum utilization of radio systems, and providing strong technical interface to our mechanical department to insure state of good repair for onboard communications issues. 24-hour availability for response to emergency calls is required. 50%-70% of field work is necessary.

You must possess a Bachelor's Degree in Computer Science or Electrical Engineering and FCC General Radio Telephone license, and a minimum of 7 years' electronics experience, including 5 years' experience in Radio, Public Address and Computer Control Systems, 5 years' managerial/supervisory experience, and 3 years working knowledge of radio and PA test equipment. Strong oral and written communication skills, along with demonstrated computer literacy (spreadsheets, etc) required. Knowledge of Public Address System, Operations Control Center and Visual Information Systems is preferred.

R A D I O M A I N T A I N E R

You'll install, repair and maintain communications equipment including radios, PA systems, cellular telephones and fire/burglar alarm systems, as well as troubleshoot, repair and replace to the component level. You'll also perform periodic inspections, completing all required paperwork.

You must possess an FCC General Radio License, valid driver's license, knowledge of electronic theory, and the ability to read prints and use test equipment. Good oral and written communication skills required.

As a member of our dedicated team of professionals, we'll offer you a competitive salary and comprehensive benefit package. Please send or fax your resume and salary history, indicating position of interest to: Employment Office-FG-MRT, MTA Metro-North Railroad, 347 Madison Avenue, 4th Floor, New York, NY 10017, FAX: (212) 340-4970. Equal Opportunity Employer.



**Metro-North
Railroad**
Going your way

Also see us on the Worldwide Web at: www.mta.nyc.ny.us

Come join the professional difference

Motorola/E.F. Johnson Wireless Communications Company seeks qualified Bench Technicians and Installers specializing in Voice and Data Radio Systems due to expanding growth. Come live and work in Beautiful Northwest Arkansas (Ozark region). Low cost of living, excellent wages, benefits and TERRIFIC ECONOMY make this a GREAT opportunity for Experienced Personnel with Good Attitude and Neat Appearance. Send resume to:

Communications Plus
1706 SE Walton Blvd., Suite A
Bentonville, AR 72712
or fax to (501) 271-7695

C O M M U N I C A T I O N S T E C H N I C I A N

One of Motorola's largest independently owned service organizations is seeking motivated individuals to service and install communications products and systems. Two years experience and NABER or FCC certified preferred. Opportunities available in several locations throughout the Southeast. Top pay, benefits and 401K plan. Please send resume to:

Hasty's Communications
Attn: Mike Hasty
112 Key Drive
Brunswick, GA 31520
(912) 264-2765

Small cost...BIG results!
MRT Classifieds.

equipment for sale

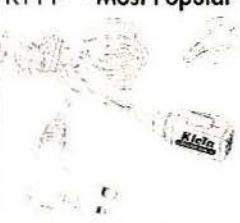
A u d i o A c c e s s o r i e s f o r 2 - W a y R a d i o s !

Klein
electronics
(800) 959-2899

Fax: (760) 631-1163
E-mail: info@kleinelectronics.com
Web: www.kleinelectronics.com

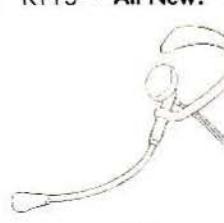
Call Now!

K111—"Most Popular"



2 Piece Surveillance
Mic Kit

K113—"All New!"



Earloop with Boom
Microphone & Inline PTT

K200—"Heavy Duty"



High Noise Earmuff with
Noise Canceling Mic
Single or Dual Muff

K9725—"Easy To Use"



Remote Speaker Mic
for Motorola™ Radius®
Radios

Circle (100) on Fast Fact Card



COMM-NET 2000
Automatic ON/OFF Delay Timer

✓ Programmable 15 minutes to 12+ hours
✓ Handles 30 continuous amps at 12 volts
✓ Easy to install/Warranty 1-year
✓ Eliminates battery failure/replacement
✓ Protects your radio & cellular phone
Fax: (800) 283-5158
(800) 337-6475
Web: www.makewebs.com/comm2000

Circle (101) on Fast Fact Card

UHF Syntor X T34VBJ, less acc. \$50
UHF Micor T34RTA, less acc. \$35
VHF Mastr II Hi/Lo, Dual Band,
110w, less acc. \$75
- All Equipment Bench Tested -

H A M B L I N C O M M U N I C A T I O N S
1-606-528-8961 • email: dahamblin@kth.net

**USED RADIOS
at Low Prices!**

- MICOR
- MITREK
- PORTABLES
- MOCOM 70
- MAXAR
- RPTRS
- GE
- RCA
- ACCESSORIES
- TONE ELEMENTS
- CRYSTAL ELEM.
- BASE STATIONS

Large Quantities • (940) 433-5452

equipment for sale

Voice Pager with Monitor

Available options:

- *Vibrator add \$5
- *Voice Storage add \$10
- *New NiCad Batteries \$6
- *Used chargers \$19
- *Extended Warranty 1 year \$19 - 2 Years \$18 per year
- 1 year - 3 Years \$17 per year



- ☒ Durable Motorola KeyNote® pager
- ☒ Reconditioned to factory specifications
- ☒ We add our unique Monitor Adaptor - Pager functions the same as a Minitor II® in Monitor mode
- ☒ 90 Day Warranty with optional extended warranty
- ☒ Price below is on **Your Frequency** and programmed to **Your Paging Tones**
- 1 - 20 units \$135 each 51 - 100 units \$132 each
- 21 - 50 units \$128 each over 100 units \$115 each
- Dealer prices only, end user prices slightly more

*Minitor II pager repair just \$29.50 includes all Parts and Labor

*Minitor I & II tone reeds \$25 each

*Minitor II Scan Adaptor (scan 2 channels) \$55 installed, or do it yourself kit \$45

*Minitor II freq conversions (board swaps)

Wanted: Pagers - Minitor II

Circle (102) on Fast Fact Card

P & W Paging and Wireless Service Center

800-822-2180

International: 561-683-0022

Fax: 561-683-0059

e-mail: pwserctr@aol.com

<http://members.aol.com/pwserctr/home.htm>



ERICSSON 

Authorized Distributor

Sharp
COMMUNICATION

www.sharpcom.com

1-800-548-2484



Circle (104) on Fast Fact Card

WHOLESALE

PRS radio sales to dealers only



- Mobiles
- Portables
- Conventional
- Trunked
- Accessories

SAMLEX
Power Supplies
WHELEN
Automotive
Safety & Warning
Signals
COMM SHOP
Software

HC ANTENNAS & BATTERIES
(Best Antenna & Battery Pricing in the Industry!!)

NMO Mobile Antennas

Low Band

HC29	29.5-35MHz quarterwave	\$15.99
HC34	34-40 MHz quarterwave	\$15.99
HC40	40-50 MHz quarterwave	\$15.99

VHF

HCQ151	151-162MHz unity gain, chrome	\$2.64
HC150	136-174MHz 3dB gain, 5/8 whip	\$13.99

UHF

HCQ430	430-470MHz unity gain, chrome	\$2.64
HCQ450	445-475MHz 5dB gain, 5/8 over 1/2 wave	\$13.99

800-900MHz

HCQ800	806-896MHz unity gain, chrome	\$2.64
HCQ800	800-900MHz 3dB gain, Cellular	\$9.99

NMO MOUNTS

HCM	3/4" hole mount, 17" RG58A/U coax, no conn	\$5.99
HCMP	Same as above, with soldered PL-259	\$6.99

HCT

HCT	Trunk lip mount, 17" RG58A/U coax, PL-259	\$9.99
HCTSS	Trunk lip mount, 17" RG58A/U coax, heavy duty stainless steel, PL-259	\$13.99

HCMM3

HCMM3	Magnet mount, 17" RG58A/U coax, PL-259	\$11.99
HCL	Trunk gutter bracket, 3/4" hole "L" bracket	\$1.49

MOTOROLA BATTERIES & ELIMINATORS

HC9628	GP300 Battery	\$29.00
HC8148	P110 Battery	\$33.00

Batt. Elim.

Batt. Elim.	GP300 Radio	\$29.95
Batt. Elim.	P110 Radio	\$29.95

HNN9628A

HNN9628A	GP300 Battery (original)	\$49.00
HNN8148A	P110 Battery (original)	\$49.00

Quantity discounts available! No minimum order!

Same day shipping!

Order entry & customer service 24 hours/7 days

Call today for our FULL LINE CATALOGUE!!

Phone: 1-800-654-9550 • 973-389-9600

Fax: 973-389-9696 • E-mail: holzberg@juno.com

Be sure to visit our website at www.holzberg.com

Circle (103) on Fast Fact Card

COMPLETE CHANNEL ELEMENTS
YOUR FREQUENCY
LIFETIME GUARANTEE
\$20.00 - \$25.00

Crystals
We Buy Used Elements

NKX

1814 Hancock St.
Gretna, LA 70053
504-361-5525 (in LA) • 800-237-6519
FAX 504-361-5526

**SERVICE MONITORS
FOR SALE**

MOTOROLA R-2038/DHS \$5.900 IFR 1200-S \$6.200

MOTOROLA R-2008/DHS \$5.900 IFR 1500 \$5.900

MOTOROLA R-2410-A \$4.800 HP-8920-B \$12.900

MOTOROLA R-2001/C/H/S \$4.200 HP-8920-A \$8.900

MOTOROLA R-2600/C/H/S \$8.500 IFR-1600 \$10.900

FOR SALE 5 R-2038/O/H/S SERVICE MONITORS

FREQ. RANGE 1 MHZ TO 1 GHZ SPECTRUM ANALYZER/

SWEEP, DUPLEX GENERATOR, MULTIMODE CODE

SYNTHESIZER, CELLULAR/TDR TEST

ASKING PRICE \$5,900 EACH

USED TEST EQUIPMENT WANTED

RF IMAGING & COMMUNICATIONS

925-229-2034 FAX: 925-229-2035

<http://www.best.com/~rfimage>

e-mail: rfimage@best.com

RCW
Radio Communications
Wholesalers

Your Full Service,
VALUE-ADDED Distributor of
Communications Products.

Check out our Web specials!
www.radiocomm.com

- Wholesale prices to Dealers Only.
- Self-servicing users welcome.
- We carry a wide selection of both radios and accessories for your convenience.
- We have a **Flat Rate Repair** service.
- We sell and install MX-COM boards.

800-726-9015 • 612-808-0069

fax: 612-808-0087

email: sales@radiocomm.com

Circle (105) on Fast Fact Card

BUY & SELL:
LTR-800MHz & 900MHz EF Johnson • Kenwood • Uniden
MOTOROLA

UHF • VHF • 800MHz • 900MHz
• Mobiles • Portables • Repeaters • Amplifiers • Paging Transmitters

1-800-786-2199

203 N. Chestnut Street • McKinney, TX 75069

Fax: 972-562-7957

Mike Malone

www.usedtoway.com

We Buy
Used 2-Way
Radio
Equipment

equipment for sale

BUY • SELL • TRADE • CLEAN WORKING EQUIPMENT

Base, Repeaters, Paging TX	
20-MST 5000C 74CXK 7106 450 MHz 100W Repeater	From \$2995
6-Mot MCR-100 UHF 25 Watt Repeater	From \$1495
3-Micor 75W UHF Repeater	Call
1-Micor 250W UHF Repeater	Call
20-GE 900 MHz-PRC-B7 45W Repeaters & Digital Paging Station	Call
10-900 MHz Paging Tx Mot. GE, Granger	From \$995
20-Mast I-E 75W UHF Mobile Repeaters w/Duplexer	From \$295
10-MICOR 600 MHz Repeaters 125W	From \$1000
50-Micor Base/Repeaters 100-375 Watt Low or VHF	From \$795
4-MSPR 2000 Base/Paging TX C74GRB & C73KSB Rpr	From \$1895
20-Mast II Base/Repeaters 60-250 Watt All Bands	From \$1495
20-Micor Base 100 Watt All Bands	Call
25-Aerotron Pioneer 1000 VHF Repeaters ACSB	Call
Mobiles 25-50 MHz	
200-Mitrek 30-39 MHz 100 Watt	Sale
300-Mitrek 39-50 MHz 60 Watt	From \$50
10-Synlter X 30-50 MHz 100 Watt	Call
20-Delta 36-42/42-50 MHz 100 Watt	From \$100
200-Mast II 30-50 MHz 60-100 Watt	From \$50
10-Mitrek 70-8586 100 Watt R/T, 36-42 MHz	From \$195
Mobiles 150-175 MHz	
10-HT 600 P-200, 6CH, DTMF	From \$350
10-Mitrek 45-90 Watt 4 Ch.	From \$50
6-Mitrek 70-480 B/R/M	From \$200
60-Synlter X 110 Watt 32 Ch	From \$200
30-Micor 45-100 Watt 4 Ch	From \$50
20-Mast II 60-100 Watt 3 Ch	From \$50
30-MVP 35 Watt Mobile/Repeater	From \$100
20-Delta 3 100 Watt	From \$100
50-PAC-RT 1.5 Watt Mobile Repeater	From \$100
200-Aerotron Pioneer 2000 ACSB	Call
UHF Mobiles 450-470 MHz	
5-HT1000 HOSIDC9A 16 Ch w/DTMF	From \$495
30-Synlter X 9000 T74KEJ 110 Watt	Sale
10-Spectre T84FWA7HAGAK 110Watt	Sale
4-Ranger 50Watt	From \$200
8-Delta SX 100 Watt	From \$300
20-Synlter X T34VBJ 32 Ch 40W	From \$100
20-System 9000 PAG-RT 4KEA300GA	From \$495
50-Mast II 45-100 Watt Repeater Builders	From \$100
15-Mot PAC-RT Mobile Repeaters	From \$200
30-Mitrek T44JJA 50 Watt	From \$100
800 MHz Mobiles	
10-Portables, MTX 8000T, STX	Call
20-Synlter X 9000 35 Watt	Sale From \$395
10-Spectre T45KASS/3SAK 1.52 SmartNet w/ VRS & Siren	Call
8-Spectre D45KMAT/3ASAK	From \$350
50-Maxtrac 800T 15-35 Watt B-1-B-7	From \$150
30-Synlter X T45VBJ 35 Watt DualMode	From \$100
20-Spectre 900-B7 F.K	Sale From \$350
20-EX II 35 Watt W/M II PA	From \$100
100-Mostek, Micors, Traxars, Midland, TAC, TEC, GE	Call
Misc. Items	
1-R 2001 1 Serv. Mon. Good Condition	From \$2500
30-Spectre Voter Rec/Corporators	Call
40-Centracom II Control Eq., Consoles BIM, CEB, Panels, Cabinets	Call
6-Centracom I Consoles & Lots of Parts	Call
500-MOT & GE Toms & DC Remotes All Types	Call

BARNETT ELECTRONICS INC.

330 HWY 236 W., Lenexa, KS 66208

ORDERS & INFO: 800-423-3858 FAX: 913-676-2473

For Expanded List, updated weekly, look at our Website: www.barnettelec.com

Info: 501-676-5506

VISA & MC Accepted, NO COD's



Circle (106) on Fast Fact Card

PRIMEDIA Intertec Bookswww.internettelephony.com**www.usedradio.net**

(Equipment list, prices & order capability all on the Web)

Motorola-Maxon-Kenwood

Portables ★ Base Stations ★ Mobiles

SP10/P110/GP300/M120/GM300

SP2550/SL500/CPO510

ETC.

Close-out Pricing!**American Radio Exchange**

Ofc: 888.260.7368

Fax: 310.312.5437

A Passion For Excellence.**Call Today For Your FREE Catalog!**www.antenex.com**ANTENEX****ANTENEX** INC.

Antenex is an established leader in the design and manufacture of innovative antenna products. Our latest Antenex Catalog is the perfect reference and buying guide for dealers. It features new products, as well as color photos, graphs, patterns, detailed descriptions and specifications of our full line of antenna products.

United States:

Phone: (800) 323-3757

Fax: (800) 851-9009

International:

Phone: (630) 351-9007

Fax: (630) 351-9009

Antenex Inc., 2000-205 Bloomingdale Road • Glendale Heights, Illinois 60139

Circle (107) on Fast Fact Card

BUY	SELL	TRADE	• BOARDS	• STRIPS	• ACCESSORIES	• ELEMENTS	• REEDS	• BOARDS	• STRIPS	• ACCESSORIES	• ELEMENTS	• REEDS	• BOARDS	• STRIPS	• ACCESSORIES	• ELEMENTS	• REEDS	• BOARDS	• STRIPS	• ACCESSORIES	• ELEMENTS	• REEDS	• BOARDS	• STRIPS	• ACCESSORIES	• ELEMENTS	• REEDS			
PCI — PEKAAR COMMUNICATION INC.																														
<i>S Specials of the month S</i>																														
MOTOROLA Mtrsk Tabletop base model L-44 1JA 40 watt UHF 450-470 range																														
MOTOROLA portable MT-500 model H34BBU3184A 450-470 range 8 freq, w/battery & antenna																														
ZETRON table top paging encoder Model #15																														
GE MPD portable, hi-band 150-170 range w/voiceguard																														
GE DELTA S or SX Mobile—110w, hi-band, 150-170 range w/accsories																														
GE MPS Portables synthesized version of MP3 high band with battery																														
GE DELTA tabletop base 40 watt UHF 450-470 range																														
GE MARC V SRM trunked repeater 800 MHz range, less duplex & cabinet																														
GE PHOENIX Mobile NSH/H1W40TB—Hi-band dual portny scan/grey case with accessories																														
GE PCS portable, hi-band 150-170 range w/scan																														
GE MPA mobile, 800 MHz range w/accsories																														
GE CMX 8630 mobiles 800 MHz range w/accsories																														
Ericsson GE MDS mobiles comb TL800, 800MHz range w/accsories																														
Catalog Available																														
<i>If you can't find it, try us!</i>																														
Call (973) 772-0704																														

equipment for sale

DEALERS WANTED

Now you can be a dealer in a new line of
MOTOROLA 2-WAY RADIOS

WETEC ELECTRONICS
AUTHORIZED MOTOROLA TS-10 DISTRIBUTOR

Call Now 1-888-GO-WETEC, ext. 10

Visit our website at: www.wetec.com

Circle (108) on Fast Fact Card



Simple internally mounted board converts your BIRD model 43 wattmeter into a complete RF remote monitor.

1. Mount assembled and tested pc board on meter terminals.
2. Plug into telephone line.
3. Call and see meter readings from anywhere in the world.

Use only when needed or as part of a complete remote sensing system. Up to 16 monitored channels available.

When not plugged in to a power source, you may continue to use it as a portable wattmeter without any performance degradation.

Tele: 847-891-2584

Fax: 847-891-2587

www.glentech-rf.com

Circle (109) on Fast Fact Card

WE
BUY
AND SELL
USED
MOTOROLA,
GE AND
ERICSSON
FM
TWO-WAY
RADIOS

**SCHAEFER
RADIO
CO.**

130 West
Fayette St.,
P.O. Box 395
Denver, IA
50622

PHONE
(319)
984-6115
FAX:
(319)
984-6220

- 14 ea. PURC 5000 Bases 900 MHz 02834A
- 12 ea. PURC 5000 Bases 900 MHz 02831B101A
- 3 ea. MURC MURC Bases 900 MHz C75A2B1101A
- 8 ea. SPRC1RA 900 MHz 0374645/85
- 12 ea. SPRC1RA 900 MHz 0274645/85
- 33 ea. KENWOOD 800 MHz 1K140
- 3 ea. RADIOS GTR 800 MHz 1K140
- 1 ea. MASTR II Apr. 460 MHz 3G65VAU91A
- 1 ea. MASTR 900 MHz 1K140
- 1 ea. MSH2000 Rpm 150 MHz 02750B3100B
- 1 ea. MURC Comm. Rpm 460 MHz 0248C1105A1
- 2 ea. MURC Bases 460 MHz 0248C1105A1
- 71 ea. SYNTOR X 9000 MHz T34K2LJ704A
- 5 ea. MARATRAC 460 MHz 1J4X1ATTA/8K
- 33 ea. MURATRAC 460 MHz 1J4X1ATTA/8K
- 6 ea. JOHNSON 460 MHz 711A096A
- 33 ea. PAC RT 460 MHz 1H411Y3110A
- 10 ea. SM62 460 MHz M441G20024A
- 2 ea. MURC Bases 155 MHz C73HTB1145
- 4 ea. MARATRAC 155 MHz 1J3X1ATTA/8K
- 10 ea. SYNTOR 155 MHz T35XRA3D00A
- 5 ea. MURATRAC 155 MHz 1K3UJ43900
- 30 ea. M1500 155 MHz MURC Models
- 40 ea. PAL RT 155 MHz 1H411Y3110A
- 19 ea. SYNTOR X 30-50 MHz T711BUT204A
- 30 ea. MARATRAC 48 MHz 1J3X1ATTA/8K
- 99 ea. MURATRAC 48 MHz 1J3X1ATTA/8K
- 10 ea. MURC Bases 37 MHz C71RTB1-906
- 1 ea. MARATRAC 37 MHz 1J1X1ATTA/8K
- 77 ea. MURATRAC 35 MHz 1J1X1ATTA/8K
- 5 ea. Tow & Go Remote Desk Sets Mixed Models
- 29 ea. Local Control Desk Sets 11493
- 28 ea. MURC 90 Series
- 40 ea. Desktop Contraption 1 Tone Remote Adapters
- 3 ea. MURC Phone Patches 11398

WANTED: RADIOS, Bases, Mobiles,
Portables & Repeaters • ALL RANGES
& UHF Syntors

• PAGERS • EXPORT ITEMS • ACCESSORIES

NEW & USED EQUIPMENT

• KENWOOD LMR & AMATEUR
USED/NEW (some restrictions apply)

• KENWOOD LTR
Turnkey Trunking Systems

• MOTOROLA Radius
USED & NEW

• ICOM Radios
Land Mobile & Amateur
Marine & Avionic

• MAXON LMR

• MAXRAD Antennas

Quality Service at the Lowest Prices!

FACTORY AUTHORIZED
DISTRIBUTOR

COMMUNICATIONS WEST, Ltd.

800-264-9516

Fax: 303-415-1557

e-mail: commwest@aol.com

LOWEST PRICES!

**CHANNEL ELEMENTS
YOUR FREQ. - \$20.00**
with trade-in/3 working days

CRYSTALS

MAXON, TEKK, UNIDEN/7 working days

Channel Element HQ/Kirby Ent.
4120 Kirby Rd. Cincinnati, OH 45223

1-800-237-9654
FAX: 513/542-8870

USED EQUIPMENT SALE

- 1 WILSON HI-1000 100W 4F 100W VHF CHARGER
- 1 MOTOROLA MURC 40W 100W 4F 40W
- 1 GE MURC 40W 100W 4F 40W
- 1 GE MASTR II 100W 4F 100W LOCAL HEM

- 1 GE DELTA 100W 30W 4F 30W SYNTH
- 1 MAXON CM400 40W 100W 4F 40W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE MAXON CM400 40W 100W 4F 40W
- 1 MOTOROLA MURC BASE 100W LOCAL HEM
- 1 MOTOROLA MURC BASE 100W LOCAL HEM

- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W

- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
- 1 GE DELTA 100W 30W 4F 30W
<li

WHY PAY MORE

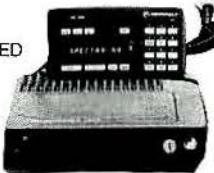
Air Comm Furnishes Quality—Price—Selection—Satisfaction

NEW OLD STOCK (N.O.S.) RADIOS (1995/96):

800MHz MTX8000 2W B3 W/ACCY	\$300
800MHz NEXTEL "DEN" 1280 PHONE ONLY	125
800MHz SPECTRA 35W BS	350
800MHz SPECTRA 15W BS	300
800MHz STD GX3030T 25W TRNKA	125
450MHz GM300 10W 16F 12.5KHz ONLY	250
450MHz GM300 25W 8F 12.5KHz ONLY	275
450MHz GM300 25W 16F 12.5KHz ONLY	300
450MHz GM300 40W BF 12.5KHz ONLY	300
450MHz BRAVO TONE ALERT W/VID	60
150MHz GM300 10W 16F 12.5KHz ONLY	225
150MHz GM300 10W 2F 25KHz	225
150MHz GM300 25W 8F 12.5KHz ONLY	250
150MHz GM300 25W 16F 12.5KHz ONLY	275
150MHz GM300 25W 8F 25KHz	275
150MHz M10 25W 1F 25KHz	220
150MHz GM300 45W 8F 12.5KHz ONLY	275
150MHz P110 5W 2F 12.5KHz ONLY	250
150MHz P110 5W 8F 12.5KHz ONLY	275
150MHz GP300 5W 2F 12.5KHz ONLY	300
150MHz P50 5W 2F PL	170
150MHz P50 5W 2F C/SQ	140
150MHz BRAVO TONE ALERT W/VID	60
150MHz SYNTOR-X 1000 BF (173VBJ7204)	350
ALSO AVAILABLE 1 EACH	
450MHz VISAR SP50 COMPACT 12.5KHz, P110 2W 2F 12.5KHz, GP300 4W 2F 12.5KHz	CALL
150MHz HT1000 5W 2F, GP300 5W 2F, P100 5W 2F 12.5KHz, SP50 5W 2F 12.5KHz, GP300 5W 16F 12.5KHz	CALL
42.5MHz MARATRAC 100W 16F W/ACCY, W/O CONTROL HEAD	400
MSF5000 SPARE CHASSIS: TLE1472, TLE2232, TLE5392, TLE6492, TLE1452	CALL
RECENT ARRIVALS:	
MOT MCR100 UHF 25W PL RPTR W/DUPLEXER	\$900
VERTEX VX500 UHF 5W 32F W/RAPID CHARGER, W/O ANTENNA	100
TRITON LHF 40W RESPONDER AMPLIFIER (P/N 450)	150
SYNTOR-X VHF 100W BF (RECOND.)	250
MARATRAC UHF 100W 16F W/ACCY	300
MOT DTMF MIC (TDB8310)	35
MOT SPECTRA PL BASE MIC (HMN1050)	40
MOT SYNTOR-X 9000 8F 64-MODE CONTROL HD (RECOND.)	100
MOT SYNTOR-X 9000 8F 64-MODE CONTROL HD (NEED REPAIR)	40
GTIX-MAXTRAC 15W MAXTRAC-LS 800MHz	CALL
SPECTRA/MAXTRAC 900MHz	CALL
EFA VIKING 8655 800MHz W/ALPHA DISPLAY	200
MOT C100 COMMAND SERIES L1473 LOCAL CONTROL	75
MOT C100 COMMAND SERIES L1474 DC REMOTE	125
MOT C100 COMMAND SERIES L1474 W/RAPID CALL PKG (NEW)	350
MOT DEXTRAIR UHF 40W DC BASE (L545UM7000)	500
MOT MITEK VHF-UHF 30W PL DC CONSOL BASE	300
MOT MICOR VHF 100W PL TONE REM CONT DUTY BASE	1000
MOT MSR-2000 2W PL BASE W/12VDC P.S.	900
MILCOM 800MHz 80W P.A. (15W INPUT)	(NEW) 500
MOT VHF PAC-RT ONLY (113TY3100)	50
GE UHF VEH REPEATER ONLY (EXEC II, MVR15MS)	50
DB UHF YAGI 10db (DB436 -37 -38)	(NEW) 60
MOT HT600 MVA ONLY (NTN5612)	80
MOT HT600 DTMF FRONT COVER (NTN5596)	50
MOT MSF5000 DIAGNOSTIC METER PANEL	150
MOT SPECTRUM 50b MVBANT (RAE4014AH0)	(NEW) 25
MOT GP300 UHF 4W 16F 2 YEARS OLD	475
PORTABLE RADIO ACCESSORIES: W/RADIO PURCH W/O RADIO PURCH	
MOT HT1000 1-HR CHARGER	30
MOT HT1000 10-HR CHARGER	15
MOT HT1000 ENHANCED CHARGER	55
MOT HT1000 REMOTE SPEAKER MIC	35
MOT GP300/P110 SERIES 1-HR CHARGER	30
MOT GP300/P110 SERIES 10-HR CHARGER	15
MOT GP300/P110 SERIES REMOTE SPEAKER MIC	40
MOT GP300/P110 SERIES 6-UNIT AC PS ONLY	(NEW) 125
MOT HT600/P200 1-HR CHARGER	30
MOT HT600/P200 COMPACT CHARGER	10
MOT HT600/P200 6-UNIT RAPID CHARGER	175
MOT HT600/P200 REMOTE SPEAKER MIC	30
MOT HT600/P200 CARRY CASE W/SWIVEL	(NEW) 35
MOT HT600/P200 3' BELT CLIP	5
MOT P100HT90 1-HR CHARGER	25
MOT P100HT90 COMPACT CHARGER	10
MOT VISAR 2-UNIT RAPID CHARGER	65
MOT SABER CARRY CASE W/360° SWIVEL	(NEW) 20
MOT SABER REMOTE SPEAKER MIC	(NEW) 60
MOT MX SERIES REMOTE SPEAKER MIC	(NEW) 35
MOT MX SERIES SPEAKER/MIC CABLE	(NEW) 15
MOT SP10/P50/P10 1-HR CHARGER	20
MOT SP10/P50/P10 10-HR CHARGER	10

MOTOROLA "SPECTRA"

RECONDITIONED



A9, 450-482 MHz
110 watt, 128 Freq.

Remote mount (DTMF mic)

\$550

MOTOROLA "MSF 5000"

435-470
MHz,
110 watt



Full Duplex Base Station
or Repeater

Includes:

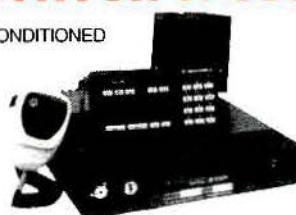
- Duplexer
- Phone Patch
- DTMF Decoder

\$2200

RECONDITIONED ("A" MODEL)

MOTOROLA "SYNTOR-X 9000"

RECONDITIONED



450-470MHz, 110 watt
32 Freq. w/accessories
(DTMF mic)

\$500

MOTOROLA "TS10"

Year-End
Special!

The Low Cost
Alternative to
FRS/Spirit Radius



1watt VHF
2 watt UHF

VHF: **\$124**

UHF: **\$145**

"PL" add \$32

Offer ends
12-31-98

NEW

MOTOROLA "SYNTOR"



450-470MHz, 40 watt,
4 Freq. w/Sys-90 acc'y
(DTMF mic)

\$150

NOT RECONDITIONED

CALL FOR OTHER RADIOS & ACCESSORIES!

WE STOCK "PL", PAGING REEDS AND CHANNEL ELEMENTS

Phone: (602) 275-4505 • Fax: (602) 275-4555

4614 East McDowell Road • Phoenix, AZ 85008

website: www.air-comm.com • email: sacohen@primenet.com

SAVE THIS AD

Circle (110) on Fast Fact Card

"MAXIMIZE YOUR PROFIT"

BUY FROM

AIR COMM
TWO-WAY RADIO SALES

SAVE THIS AD

equipment for sale

Got coverage?

Vehicular repeaters extend hand-held communications by connecting to existing high-power mobile radios and repeating conversations in both directions. Hand-holds 1-2 miles from a vehicle maintain reliable communications with the base up to 50 or 60 miles away.

The SVR-200 vehicular repeater is a cost effective solution that provides full coverage for hand-holds in critical public safety applications.



Voice **714.901.5462**

Fax **714.901.5472**

www.pyramidecomm.com

SVR-200



Circle (111) on Fast Fact Card

MOTOROLA, GE & MISC.

10	Saber 1 VHF 12ch Secure Hi-Pwr 146-162MHz	\$350
2	Saber 3 VHF 120ch Secure Hi-Pwr 146-162MHz like new	\$850
24	Mitrec 110W 1ch 42-50MHz complete w/PL	\$150
24	Maxar 80 VHF 1ch 25w mobile complete	\$50
5	Syntex 40w mobiles complete	\$175
30	Syntex X/X 40w mobile 8ch remote complete	\$200
6	Syntex X/X 9000 ultra Secure capable complete like new	\$750
2	Maxtrac 16ch 146-162 25w mobile complete	\$300
1	Radius M120 2ch 16 pin 45w mobile complete	\$300
14	STX 800MHz 3 button displays w/o controllers	\$250
1	MSF5000 UHF 100w wideplexer synthesized	\$6000
2	MSF2000 VHF 100w base station 2 ch	\$2000
7	GE MPA UHF 16ch 149-174 w/batt & ant	\$175
80	GE MPS UHF 12ch P9RMA Synthesized batt & ant	\$35
30	GE MPS UHF 12ch P9RMA Synthesized radio only	\$25
9	GE Porta 2 UHF 14MHz radio w/batt & charger	\$125
2	GE Delta SX UHF 40w w/s-550 A/B complete	\$275
3	GE Delta UHF 40w w/s-550 A/B complete	\$250
20	GE Delta 40w transceiver only MAUU20040FOUB0000	\$75
15	GE 100w transceiver only NJUH200751B	\$95
20	GE MXB615 800MHz mobile w/palm min	\$150
1	GE 100w VHF Repeater TX-154 RX-155	\$900
1	GE VHF Repeater w/duplexer RX-156 TX-158 .. \$1100	
1	Benzix King VHF 14ch w/scan keypad w/program key	\$350
2	Kenwood 800MHz handheld w/display complete	\$350
2	Kenwood 10ch UHF Synthesized radio only	\$150
3	Midland 30w 450-470 320ch mobile complete	\$400
11	Midland 35w 150-174 8ch mobile complete	\$125
5	Midland 80ch 40w 150-174 mobile complete	\$175
18	Midland 80ch 80w 40-50MHz mobile complete	\$225
5	Standard 800MHz 10ch portable w/batt & ant	\$125
1	HDX20 Laptop Programmer w/carrying case like new	\$500
1	Kustom Electronics Trioper-F Radar (police) w/horn	\$400
2	M.P.H. Industries K55 Doppler Police Radar w/born	\$275
2	Sony VP5000 Player 3.4 inch professional	\$250
1	DUP code inserter T3014CX keyloader	\$750
1	DUP XL Securenets 13014CX keyloader	\$1200
1	DES/DESXL Securenets 13011AX keyloader	\$600

407-253-0889 "1 month warranty"
M-Thurs 9am-5pm EST - Ask for John
<http://www.surfusa.com/PanikElectronics.HTML>

All CCII
Labels

WHITE, ORANGE, GREEN AND RED
BUTTONS AVAILABLE

\$12.50 ea

CCII PROGRAMMING AVAILABLE
ORDERS SHIPPED IN 14 DAYS

NORTHEASTERN
Communications, Inc.

Waterbury, CT (203) 575-9008

KASK PRODUCTS L.T.D.

Two-Way Radio Steel Brackets
hold radios in vehicles
so they can't be stolen.
Call with sizes for prices
1-800-417-7182

**SAVE BIG BUCKS ON
Used 2 Way Radio**

MOTOROLA • GE • EF JOHNSON etc.
PORTABLES / PAGERS / MOBILES / BASES / REPEATERS

Contact us when you are looking for economical used equipment. We are a reliable source for all major brands of used 2 way gear

(708) 681-0300

Buy • Sell • Trade

Visit our web site: WWW.MDMRADIO.COM
or E-Mail us at mdmradio@earthlink.net

MDM Radio Ltd.

1629 N. 31st Ave. Melrose Park, IL 60160
Tel. (708) 681-0300 Fax (708) 681-9800

SERVICE MONITORS

HP8920A	\$7500
HP8647A	\$3500
Marconi 2957R	\$4750

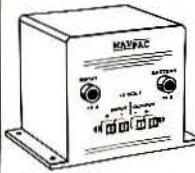
718-783-6000

equipment for sale

PROTECT ELECTRONIC MEMORY...

during engine start with
STARTGUARD

or get
continuous
protection
with
NAV-PAC.



Either way,
it's your best
insurance
against
memory
loss.

NEWMAR Newport Beach, CA
(800) 854-3906 • Fax: (714) 957-1621
Website: www.newmarpower.com

Now You Can Solve Voter System Problems Fast!

Remote Comparator Display



Remote
Voter
Display
Screen

- Control Your Voters from a Remote PC
- Cuts Costly Maintenance Time
- Finds Intermittent Problems Fast
- Reduces Receiver Downtime
- Logs Receiver Failures
- Modular & Expandable

Call or Write for our **FREE**
System Planner!

Transmitter Coverage Problems?

Transmitter
Steering Unit

- Use with Multiple Transmitters to Extend System Coverage
- Automatic Transmitter Selection
- Far Lower Cost than Simulcast
- Fills Gaps in Existing Coverage
- Better than Relay-Based Controllers
- Works with Standard Base Stations

Cti Products Inc. 
Land Mobile Radio Solutions

1211 West Sharon Road, Cincinnati, Ohio 45240
(513)595-5900
Info@ctiproducts.com
www.ctiproducts.com/landmobile

Circle (114) on Fast Fact Card

DTMF / encoders

STEEL KEYS SEALED GOLD CONTACTS

An ultra high quality DTMF Encoder
for absolute reliability and function.

- Contacts are: Water Proof / Dust Proof
- Completely Self Contained — No RFI
- Simple 3-Wire Connection • Output Level Adj.
- Wide Operating Range 5 to 16vdc
- Wide Temperature Range -22° to +160°F
- Supplied with Instructions, Schematic, Template & Hardware

Call or Write for Free Catalog

PK-1 \$71*/PK-1K \$78*

W/Relay

VISA/AMEX

PK-2 \$76*/PK-2K \$83*

W/Relay

*Request Quantity Price



Pipo Communications

Emphasis is on Quality & Reliability

1516 Cassil Place
Hollywood, CA 90028-7106
Tel: 323-466-5444
Fax: 323-466-1520

We've moved!
1516 Cassil Place
Hollywood, CA 90028-7106

Parts of Los Angeles area code 213 is now 323.

Circle (112) on Fast Fact Card

Monitor your Tower Site from your Desktop!



AR2, by Xcel, is an automated
monitoring system that keeps you
updated on the status of your
tower site and lighting.

AR2 gets information from 32 user defined inputs, plus lighting inputs, and logs a database of the last 500 events. An alarm is instantly reported to 5 faxes (listing all information required by the FAA), and sends numerical data to 5 pagers. Other devices can be controlled with 8 users defined outputs.

**The AR2 system can turn on your tower
lights if your photocell fails, then notify you!**

With a P.C. you can connect to the AR2 unit from a remote location and get real-time status of your site, download the event database, troubleshoot, and control other systems, such as HVAC and security.

Call toll free
1.800.288.7362

Fax
1.219.259.5769

Internauts connect to
<http://www.xcel.com>

Xcel Controls, Inc. - 1600 W. 6th St. - Mishawaka, IN 46544

Circle (113) on Fast Fact Card



Communication Test Equipment Sales and Service

MOT R2670A/analog trunking ..	\$15,000	MOT R2008C	\$4,500
MOT R2600C/HS	\$8,500	IFR 1200S	\$6,000
MOT R2600C/NT	\$7,750	IFR 1500	\$6,500
MOT R2024D	\$6,500	IFR 500	\$2,500
MOT R2009D	\$6,000	HP 8590A	\$4,500
MOT R2008D	\$6,000	Sage 930A	\$3,500

(888) 846-4614

WWW.EML1.COM • email: eml@pov.net

277 Mallory Station Road, Suite 101, Franklin, TN 37067

Circle (115) on Fast Fact Card

December 1998 **MOBILE RADIO TECHNOLOGY** 111

equipment for sale

Compatible Motorola® Radio Programming Equipment

PA-I Programming Adaptor...\$139.95

- Compatible with "RIB" unit.
- Rugged steel case.
- Power LED.

NOTE: Hardware Only. Software sold by Motorola® and other products are trademarks of Motorola, Inc.

PA-II Programming Adaptor...\$159.95

- Contains rechargeable NI-CAD Batteries:
- Perfect for field use and Portable, Laptop & Notebook Computers.
- Status LEDs: Power On and Charge.
- Power Switch.
- Power / Charger Included.
- Runs for 8 continuous hours from a full charge.



IMPORTANT
Reference code number
when Ordering Catalog:
Code Number: MR67

Orders before 1pm EST are Shipped that Day!

Prices, availability and specifications are subject to change without notice. Shipping and handling are not included with price.

470 Armour Drive NE • Atlanta GA 30324-3943 • Tech Info: 404.872.0722 • FAX: 404.872.1038


PA-III Pocket Programmer...\$189.95

- Micro-Size Design for Convenient Portability and Field Use.
- Uses Surface Mount Technology
- Rechargeable ---- Works hours on one charge.

Polaris Industries

1-800-752-3571

Circle (116) on Fast Fact Card

**DOES YOUR
PRODUCT NEED A
LABEL?**

**ANCHOR
GRAPHICS
MARKETING INC.**

Specializing in:

- CELLULAR LABELS
- BAR CODES
- BATTERY LABELS
- PAGER LABELS
- ID. LABELS
- TAMPERPROOF

922-242-0439 ANCHORGRAPHICS.COM 125 LEWIS
FAX 922-242-0599 CARRINGTON, TX 75007

MOTOROLA RADIOS

RADIUS — RADIUS — RADIUS

Tons in stock at USA's lowest prices
SP50—P110—GP300—SM50—SM120—M120—GM300
will absolutely be SHIPPED TODAY!

Full line of previously owned trunked & conventional radios
HT600/VISAR/HT1000/MT2000/MARATRACS/
TRUNKED 800 & 900 SPECTRAS/MAXTRACS/
PP1000X/MTX/MTX8000/VISAR/STX/EXPO

RADIO EXPRESS INC.

OFC: 800-545-7748 FAX: 703-830-8710

e-mail: radios4sale@juno.com

All major credit cards accepted

Circle (117) on Fast Fact Card

★ BEST DEALS!!! ★

Call us for low, low prices on 2-Way radios, accessories, batteries & spare parts.

Check our current specials on GP68, GP300, spare batteries for GP300, P110, HT1000 and many other items, available from stock.

Altek, Inc.
217 NW 57th Ct., Miami, FL 33126
(305) 266-8407 • Fax (305) 260-7580
email: alteki@aol.com
Please visit our Web Site: www.altek-inc.net

CRYSTALS

7 DAY DELIVERY
COMMERCIAL/CUSTOM SPECS
TWO-WAY, PAGER, SCANNER
CHANNEL ELEMENTS REDONE

Toll Free: 888-678-9825

Fax: 915-633-6209

CUEMEKS ELECTRONICS
9836 Monaco Dr., El Paso, TX 79925

CMC ENTERPRISES 2-WAY, MICROWAVE & TELECOM EOPT.

Quantity	Equipment List	Price
11	GE MVS High Band Mobile 16ch scan 45w	\$150 ea
03	Cushman CE2 Frequency selective volt meter	\$1000 ea
50	Motorola Starplex Channel Modems MLN6287	\$225 ea
50	Motorola Stapler Term Cards MLN6288	\$80 ea
03	Motorola 800mhz Moor Trunking Repeaters w/o pwr amps	\$900 ea
03	Motorola Comparators, Signal to Noise type	\$400 ea
40	Kenwood 601-5 16ch 42-50 mobiles	\$150 ea
06	Centracom II consoles, less CEB	\$500 ea
04	Motorola Maxtrac LS 800 mhz LTR VGC	\$200 ea
10	300mm Tower beacons	\$250 ea
42	12-50 amp battery chargers 24v	\$CALLS
05	Motorola MR-600 Non-standby loop radios 60Hz 300ch	\$1000 ea
02	Motorola MR-600 hot-standby 60Hz 300 ch	\$1500 ea
05	Fairtron FAS-6000 non-standby loop radios 60Hz 300ch	\$3000 ea
08	Fairtron LR-1.2 hot-standby 2.1-2.3GHz 48ch	\$1500 ea
01	Fairtron FAS-6000 terminal w/out standby	\$5000 ea
08	Motorola Starpoint 2.1-3GHz radios w/out standby	\$1800 ea
12	Motorola Maratrac A2 UHF 110w w/acc	\$375 ea
12	Fairtron R 1.6GHz radios, w/out standby, very good cond'n	\$2500 ea
15	Motorola Syntor X 9000 110w w/acc	\$400 ea

On New Listing Call Charles at 336-769-2885

For more equipment, visit our website at www.cmcent.com

TEST EQUIPMENT - BUY & SELL!!

HP8902A Measurement Receiver-\$11,900 HP8901B Modulation Analyzer-\$2700, HP8901B Audio Analyzers-\$1500, 150MHz 1.8GHz Generator-\$3600

SERVICE MONITORS

IFR COM 1200A/4711112 (NEW) - \$10,900 IFR 1500 (invt) \$5900
IFR 1200S \$5900 IFR 1100S \$5900
HP8915A \$2900 HP89303A (G)MA adapter \$1200
HP8920A \$12000 HP8920B 1024x113 \$5400
HP8921D (w/ TDMA) \$32014 \$5900 HP8920C 4/13 \$7000
HP8921D (w/ TDMA) \$32027A \$13,500 HP8921A \$5900
HP8920D (w/ TDMA) \$7600 Motorola R2001D \$5400
Motorola R2600C/H5 \$7900 Motorola R2406A \$4900
Motorola R2200B \$5900 Motorola R2557A \$2900
Motorola 2857D \$5900 Motorola R2567B \$4900
Motorola 2855D \$4100 Motorola R2565A \$2900

Syma 100MHz Signal Generator
Hartl 980-1500MHz Signal Generator, low phase noise, high stability, AM/PM/
Pulse/Phase Modulation, NEW units with warranty-\$1900, HP8957A-\$2900.

Amtronix
Ph: 716-763-9104, 716-661-9964 Fax: 716-763-0371
<http://www.amtronix.com>

Guaranteed Best Price on

Radius maxon
& **MOTOROLA** Minitor Pagers

SALES & SERVICE

It's in stock; we'll ship tonight!



**800-53-
RADIO**

CALL US FIRST at AIR COMM WHY PAY MORE!

Used/Reconditioned Motorola, E/GE, EFJ, Kenwood, Uniden 2-way radios and accessories

—ALL FREQUENCY BANDS—

PLUS

"PL" and paging reeds/filters, TCXOS
Call us last to sell any of the above.

WE PAY CASH

AIR COMM 4614 E. McDowell Rd. Ph.: 602-275-4505
Phoenix, AZ 85008 Fax: 602-275-4555

equipment for sale

GP-68 GP-88 GP-300

SPECIAL PRICES and in STOCK!

VHF 136-174 MHz
UHF 430-470 MHz
20ch or 16ch
DTMF Keypad (CP-50/GP-68)

Features:

PL/DPL built-in
9 DTMF memories
Auto or Programmable
Repeater Offset
2 or 5W Power level
All (CP-50/GP-68) radios include:
3 hour rapid charger
1200mAh battery

E-mail: info@nsiradio.com



NSI Communications
Tel: (253) 946-2426
Fax: (253) 946-8311

some items export only



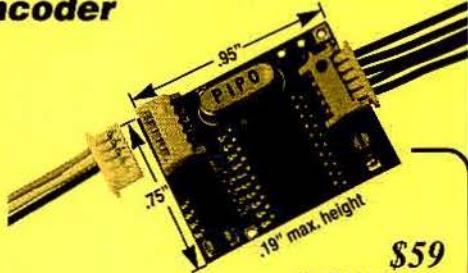
**MAKE
CONTACT...
with an ad
in MRT
Classifieds!**



AE-1... 2 Memories... ANI/ENI* High Speed DTMF Encoder

- 2-Way Radio
- Broadcasting
- Security

* ANI...Automatic Number Identification
* ENI...Emergency Number Identification

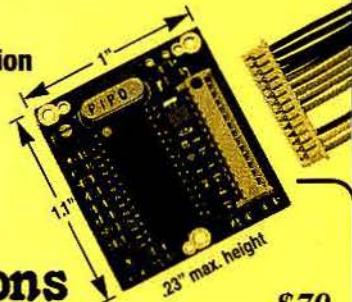


\$59

Qty. Pricing Available

AE-2... 6 Memories... Status Indication High Speed DTMF Encoder

- 180 Digits / Any Speed Any Configuration
- 6-26 VDC @ .5ma
- CW / Tone Option
- Field Programmable



\$79

Qty. Pricing Available

Pipo® Communications

Emphasis is on Quality & Reliability
1516 Cassil Place • Hollywood, CA 90028
CALL 323-466-5444 FAX 323-466-1520
E-mail: pipo@compuserve.com

Call or E-mail for FREE
detailed brochure

Parts of Los Angeles area code 213 is now 323.
Circle (118) on Fast Fact Card

USED EQUIPMENT FOR SALE

300 Motorola 800 MHz GTX mobile model M11UGD6CB1
125 Motorola 800 MHz GTX Portable model H11UCD6CB1 with fast charger
71 Motorola 800 MHz Spectra mobile model D45KG45JB5K
180 Motorola MARATRAC VHF mobile model T73XTA7TA7K
51 Motorola MARATRAC VHF mobile model T73XTA7TA7K with rear group
75 Motorola Spectra VHF mobile model T83FWA7HA9K
14 Motorola Spectra VHF mobile model T83FWA7HA9K with siren/pa
36 Motorola SYNTOR X9000 VHF mobile model T73KXJ7Q4BK
33 Kenwood VHF mobile model TK730HBK 160 channel with dual alpha heads
15 Kenwood VHF portable model TK250G. with fast chgr., case, spk-mic
52 EJF 800 MHz mobile model 8615

Contact Paul Boudreau at ALL-COMM Technologies, Inc.
55 American Legion Highway, Revere, MA 02151
781-289-3000 • FAX 781-289-7300 • pboudreau@allcomtech.com

Totally Served !!!



*This is Truly a
Radiocommunication
Catalog !!!*

EPCom

ASK FOR YOUR FREE CATALOG
Tel. (915) 533-5119 Fax (915) 542-4701
1630 Paisano Dr. El Paso, TX, 79901 U.S.A.
<http://www.epcom.net>
E-Mail: epcom@whc.net

Advertise in MRT Classifieds!

CELLULAR & PAGER LABELS

LABELS THAT STICK! Labels for pagers, cellular phones and two-way radios with your company's logo. Warranty labels for batteries.

Bar-code printing systems.

Call us for free samples.

ADVANCE LABEL & TAG

1725 N. McDonald St.

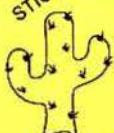
McKinney, TX 75069-8230

1-800-466-5345

FAX: 972-548-2518 972-542-5345

www.altag.com

World Class Service for Worldwide Customers!



Wireless... Remote... Control... Anything...



Technically, we are on solid ground. You have the wireless application, we have the solutions. We now have Flex capabilities in all of our products.

THE WIRELESS CONTROL SOURCE.

Page Tap, Inc.

tele. 303-337-4811
fax 303-337-3084
<http://www.pagetap.com>

equipment for sale

LOW, LOW PRICES

5	MOT Maxar 60 mobiles, 60w, 30-36mc, PL	\$195 ea
1	MOT Maxar 80 VHF mobile 100w Mod#D731SAJ000AK	\$145
1	MOT Maxar 80 UHF mobile, 30w, PL w/acc	\$245
36	MOT Maxar low band mobiles 100w 42-50mc w/acc, PL	\$375 ea
16	MOT Maxar UHF mobiles, 110w, w/acc, PL	\$395 ea
40	MOT Mitrex low band mobiles 100w 40-50mc w/acc, PL	\$195 ea
82	MOT Mitrex 50w UHF mobiles w/acc, PL	\$160 ea
2	MOT Mitrex 100w bases, 30-40mc, local/remote cont. mod	\$995 ea
2	MOT Mitrex 100w bases, 40-50mc, local/remote cont. mod	\$995 ea
1	MOT Mitrex 110w VHF mobile, PL, local/remote control mod	\$895
1	MOT Mitrex UHF 50w basic, local/remote control model	\$500
1	MOT Mitrex VHF 60w basic, local/remote control model	\$590
60	MOT Mitrex mobiles VHF 110w, PL	\$195 ea
60	MOT Mitrex low band mobiles, 30-40mc, 60w w/acc, PL	\$150 ea
50	MOT Mitrex UHF 50w mobiles, drawer units	\$75 ea
35	MOT Mitrex 30w, 30-40mc, drawer units	\$75 ea
4	MOT Micor mobiles VHF 110w, w/acc	\$175 ea
5	MOT Micor 30" cabinets, clean	\$195 ea
80	MOT Micor 100w mobiles, 42-50mc, w/acc	\$195 ea
4	MOT Pak Rail repeaters VHF	\$105 ea
4	MOT Pak Rail repeaters w/portables & veh. chargers, UHF	\$305 ea
6	MOT MT500 portables, low band 42-50mc	\$100 ea
4	MOT Pack Set low band, 42-50mc	\$145 ea
8	MOT MT500 portables VHF	\$100 ea
20	MOT T-1600 remotes	\$100 ea
2	MOT Stateline receivers	\$395 ea
1	MOT Micom 70 VHF 100w mobile	\$105
1	MOT Micom 70 UHF base, PL, desk mike	\$105
1	MOT Director II SV VHF pager w/charger	\$105
1	MOT Model S1059 test set, full featured model	\$175
1	GE Portable test set, large model	\$150
6	GE Range mobiles, 35-50mc, 60w, w/acc	\$295 ea
2	GE Range mobiles, 30w, 35-50mc, w/acc	\$265 ea
1	GE Executive II 75w UHF mobile, w/acc	\$175
4	GE PHOENIX SX VHF mobiles w/acc	\$145 ea
1	GE PHOENIX SX UHF 16ch mobile, w/acc	\$170
12	GE MASTRII 100w mobiles, 42-50mc, w/acc	\$175 ea
1	GE MASTRII 100w continuous duty amplifier, 42-50mc	\$405
1	GE Mastri II 100w continuous duty amplifier, 36-42mc	\$395
5	GE Custom MVP mobiles, VHF or UHF, w/acc	\$135 ea
3	GE PLS UHF 42freq portables, brand new in boxes w/chargers	\$225 ea
4	GE PCS VHF portables, 2 freq	\$185 ea
8	GE low band portables, 42-50mc, CG, w/acc & mnts	\$75 ea
2	GE 800mc portables, Comb PCA80400	\$200 ea
2	GE Master II 30 amp power supplies	\$230 ea
1	GE Custom MVP 42-50mc mobile, w/acc	\$155 ea
4	GE Custom MVP VHF mobiles w/acc	\$85 ea
1	New GE Custom 36-42mc w/acc	\$85
1	GE Executive II VHF base station	\$185
1	GE Executive II VHF base station	\$185
2	GE S550 Scan heads	\$200 ea
1	GE 800mc mobile w/acc, Comb TXMR875	\$195
2	GE heavy duty steel outdoor cabinets, mint, never outdoors	\$225 ea
1	GE Monitor receiver, VHF	\$165
3	Textron Oscilloscope Model 475 w/ digital multimeter, very clean	\$50
5	TPL RF power module amplifiers, 35-50mc input 1kw, output 100w	\$85 ea
20	IDA remote control, tone	\$85 ea
1	Kenwood TK-620 kw band base station, brand new in box, 29.7-37mc	\$275
3	New Kenwood TK-860H 35w, UHF mobiles, 32ch scan	\$427 ea
1	New Kenwood Model KSG-4500 Cont. dual UHF repeater, 8 tones	\$4475
1	New Kenwood VHF mobile, 32 freq. scan, M#TK760HK	\$427
2	New Kenwood TK360 UHF 4w, 4ch ports, w/batts. & r. chrgs.	\$395 ea
1	Kenwood KP50 programmer	\$275
1	Kenwood TK801S 35w UHF mobile, w/acc	\$175
2	Astron RS12A power supplies, 12 Amp	\$110/both
1	New Astron VS7.0 Bench power supply, separate adjustable voltage and amp meters	\$350

Pre-Paid Orders Only • No Credit Cards, No C.O.D.s

N.H. COMMUNICATIONS CO.
P.O. Box 5342 • Manchester, NH 03108-5342

Tel: 603-668-3004

Circle (119) on Fast Fact Card

BUY & SELL QUALITY USED EQUIPMENT

Motorola • Uniden • Kenwood
Johnson • VHF • UHF • 800MHz
900MHz • Mobile • Portables
Repeaters

PLANO COMMUNICATIONS INC.
1-888-906-9006

**MB BASE
TRANSCIEVER**
MENTOR
RADIO COMPANY



• 1561 LOST NATION ROAD • WILLOUGHBY, OHIO 44094 U.S.A. • Phone (440) 942-2025 • Fax (440) 942-9129 •

PAGERS • PAGERS • PAGERS • PAGERS • PAGERS • PAGERS •

**McMANUS
COMMUNICATIONS**

- Refurbished Pagers
- Pager Repair
- Factory-trained techs
- New Motorola Pagers
- Parts & accessories

**MINITOR III
NOW
AVAILABLE**



eXpress Xtra™
• Synthesized

We Buy Pagers
“ONE CALL GETS IT ALL”

400 North Fifth Street
Blytheville, Arkansas 72315
Phone: (870) 763-6250 • Fax: (870) 763-6533
E-Mail: mcmanus@arkansas.net
Web Site: www.mcmanuscomm.com

MOTOROLA
Authorized Paging Distributor

PAGERS • PAGERS • PAGERS • PAGERS • PAGERS • PAGERS •

Circle (120) on Fast Fact Card

(540) 891-0569 We accept VISA and MasterCard

Fax: (540) 891-0538

**MECHEM
ELECTRONICS**

- Two-Way Radio Communications
- New and Reconditioned Radios
- Custom-Designed Radio Systems
- Repair and Programming
- Consulting

UHF 250W Repeaters (Clear and Secure)
UHF DES Repeaters 420-450 & 450-470
Dual Syntor-X Secure VHF/UHF Dual Code

URL Address: <http://www.mechemelectronics.com>

E-Mail: mechem@fls.infi.net

Circle (121) on Fast Fact Card

Invest your advertising
dollars where your
prospects invest
their time...

MRT
CLASSIFIEDS

FOR SALE HP-8920-A/B Radio Service Monitors with Options

8920-A Options 2/3/4/5/7	\$8500
8920-A Options 2/3/4/5/7	\$8500
8922-H GSM Tester Opt-9/11...\$20,000	
8920-B Options 1/10/2/7/3/4/11	\$12,900
8921-A Cell Tester	\$12,000
8920-A Options 2/3/4/5/11/13/20...	\$8900
8920-A Options 1/2/3/4/5/13/14/50...	\$8900
120-Day Warranty & a 5-day Right of Refusal. All units are calibrated & have manuals.	

RF IMAGING & COMMUNICATIONS
510 Westaire Blvd. • Martinez, CA 94553
925-229-2034 FAX: 925-229-2035
e-mail: rimage@best.com

• 118.000-135.975 MHz • 10
Watt Output • Performance
Monitors • Options — 1-6
Channels, Remote Operation,
Rack Mounting • Other Civil
Aeronautical Radios • Mobile •
Radio Light Control • Nav Signal
Monitor / Alert •



One Channel Standard
Up To 6 Channels Optional

**AIRPORT
MOBILE
COMMUNICATIONS**
MENTOR
RADIO COMPANY

equipment for sale



Season's Greetings

Radius®

Repeat of a past monthly special made even better: SP10s at dealer cost, VHF, CSQ/PL; \$144.00/\$173.00—UHF, CSQ/PL; \$161.00/\$191.00.

All units new, with all accessories, and **YES, shipping and insurance are FREE!**
YES, FREE in the continental U.S.

We sell to end users only...no re-sellers or dealers, please!

From your RADIUS LEADER,
PROCOMM

INFORMATION: 805-497-2397
805-494-5078
8:00 - 6:00 pm Pacific Time

VISIT OUR WEB SITE:
<http://www.procommusa.com>
e-mail: procommusa@aol.com

Ordering: **800-497-2394**
24-Hour Fax Line: 805-494-3115
or 805-497-3430

Where quality is #1, but where we want to be dead last when you call for pricing!

Circle (122) on Fast Fact Card

WINTER SPECIALS

Repeaters on 138-150 as low as \$800
Mastr II 100w HiBand
Rearmounts \$90

Call **406-252-9220** and ask for BUD
for specials on GE/Mot parts & Eqpt.

WOLFE
COMMUNICATIONS

1113 Central Avenue
Billings, MT 59102
Phone: 406-252-9220
Fax: 406-252-9617
<http://members.aol.com/cwwolfe.com>

Buy & Sell

Motorola, Uniden, E.F. Johnson, Kenwood
Two-Way Radios and Systems



DELTA
COMMUNICATIONS

1-800-880-2250
FAX: 972-278-5085
Garland, TX

paging

PAGING SERVICE PROVIDERS!!

Add system capacity to your network easily and inexpensively with the new Kantronics **Paging Controller 2000**, priced under \$1,300.

This rack mountable, multi-mode controller can be configured as a:

- TNPP receive-only paging controller;
- Satellite-based simulcasting controller;
- First-in-line POCSAG repeater; or
- Down-stream POCSAG repeater.

The **Paging Controller 2000** supports 512, 1200, and 2400 numeric and alphanumeric POCSAG, multiple transmitters, and channel sharing.

Kantronics Co., Inc.

Phone: 785-842-7745 • Fax: 785-842-2031
Website: <http://www.kantronics.com>
E-Mail: sales@kantronics.com

Circle (123) on Fast Fact Card

classified

equipment for sale

BUYING ERICSSON-GE EQUIPMENT CALL OR FAX FOR QUOTE

TQ2310 Panasonic computer only	250
RS-232 for TQ2310	85
PD 638-6 VHF Duplexers	65
VHF MASTR II special receiver only package from mobile repeater	60
S825 Systems Control head	200
S990 128ch head w/warranty	125
S600 4ch head, used	50
PHOENIX-SX 16ch non-scan w/acc	165
PHOENIX-SX UHF BRAND NEW w/acc	225
MLSL160 30-42 w/acc., NEW	285
MTL UHF 4w Portable w/charger	225
MPI UHF 4w tech, special	225
MPI 8-unit multicharger, checked	5/100
RANGR 450-470 less acc. 100w	325
RANGR 35-50 less acc. 60w	250
RANGR/Delta acc. w/S600 head	165
Delta-S UHF 100w less acc.	225
Delta-S UHF 40w less acc.	135
Delta-SX VHF 110w less acc.	250
Delta-S VHF 110w less acc.	225
Delta-S 42-50 less acc. 110w	135
Delta-S 42-50 less acc. 60w	100
MVS Control panel 16ch scan U	45
MLS-I Control panel 8ch scan	40
MLS-I Control panel 16ch no scan	40
MASTR II 42-50 110w less acc.	125
MASTR II 150-174 110w no acc.	115
MPS/MPPR/MPX/MPI/MPE Chargers	CALL

NEW LONDON TECHNOLOGY

752 Alum Springs Road • Forest, VA 24551
Tel: 804-525-0068 • Fax: 804-525-0078
www.newlondontech.com

STATION IDENTIFIERS

- Morse code and Voice ID
- 3 monitors and 3 timers
- Several models available
- Special prices for a limited time

 **RACOM** 800-722-6664
216-351-1755

rentals

MOTOROLA RADIO RENTALS

- HT1000, GP300, P200
- Intrinsically Safe
- Full Line of Radio Accessories
- Mobiles & Repeaters
- 24-Hour Service
- Dealer Inquiries Invited

1-800-283-COMM

EVENT RENTAL COMM., INC.
e-mail: eventcomm@aol.com

**MOTOROLA® 2-WAY
RADIO RENTALS**

- Top Quality • Low Cost
- Overnight Delivery Anywhere

MOSS
COMMUNICATIONS
800-822-MOSS
www.mosscom.com

paging

Pagers • Parts • Service • Equipment • Training

ISO 9001 Quality
Life time Warranty

We've Got The Crystals

Over 3500 Different
Types in Stock

**NEW
PRODUCTS!**

*Internet
Telephone*

Make all the FREE
long distance calls
you want...via
the internet.
**YOU BETTER
BELIEVE IT!**

PageCo Pagers

We've got
the Pagers!
Our very own
line of high
quality
aggressively
priced numeric,
alpha, and
flex pagers

Pager Pro

The Paging Industry
Billing
Solution

The Company Behind The Name

info@pageco.com

954-491-9501

CRYSTRONICS

Circle (124) on Fast Fact Card

PRECISION QUARTZ PAGER

CRYSTALS

Engineered for optimum performance in both Pocsag and Flex technology pagers!

MOTOROLA • NEC • UNIDEN • NIXXO • EVERON • INTEK

1,000's OF FREQUENCIES STOCKED & READY TO SHIP!

LIFETIME WARRANTY

Decades of Crystal Manufacturing • Full Quality Control & Aging Process
All Size Accounts Serviced • Large Quantity Specialists • Contract Pricing Available

LCDS • COKE BREAKERS • ORIGINAL PROGRAMMERS
& Borders • & Cradles with Set Up Assistance

ACCESSORIES & PARTS • BENCH TOOLS, EQUIPMENT & SUPPLIES • DEM SERVICE MANUALS

• BATTERIES EVEReady® & Duracell® • PAGERS Stocked!

MOTOROLA • NEC • UNIDEN • PANASONIC • EVERON • GIZZMO
NIXXO • MAXON • INTEK • SAMSUNG • PAGEROLA • SHIWA

• MOTOROLA • EVEReady • Duracell • NIXXO • MAXON • INTEK • SAMSUNG • PAGEROLA • SHIWA

REFURBISH KITS • LCDs & PARTS • QUALITY CLA PLUG-INS • LEATHER CASES
BATTERIES • CHARGERS • ANTENNAS • 100s of styles

NI-MH/N-COLWON • Single/Twin/Travel • Full Line • HELLO DIRECT HEADSETS

MOTOROLA • NEC • UNIDEN • PANASONIC • SAMSUNG • SHINWA • AT&T • AUDIOVOX
NOKIA • OKI • SONY • NOVATEL • PHILIPS • QUALCOM • FUJITSU • GE • TOSHIBA

COMPANY CHECKS AND MAJOR CREDIT CARDS ACCEPTED

ACCESSORIES & PARTS

DOMESTIC & INTERNATIONAL CELLULAR PRODUCTS STOCKED & READY TO SHIP!

PREMIUM PRODUCTS

REFURBISH KITS • LCDs & PARTS • QUALITY CLA PLUG-INS • LEATHER CASES
BATTERIES • CHARGERS • ANTENNAS • 100s of styles

• MOTOROLA • NEC • UNIDEN • PANASONIC • SAMSUNG • SHINWA • AT&T • AUDIOVOX
NOKIA • OKI • SONY • NOVATEL • PHILIPS • QUALCOM • FUJITSU • GE • TOSHIBA

COMPANY CHECKS AND MAJOR CREDIT CARDS ACCEPTED

PageCorp 800-957-8700

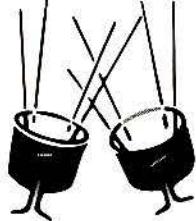
Int'l Calls: 949-721-1621 • Fax: 949-721-1030

WWW.pagecorp.com • Email: pc@pagecorp.com

ASK FOR OUR CURRENT PARTS AND PRICING HANDBOOK!

Circle (125) on Fast Fact Card

Put your
company's
name
in the
spotlight
with an ad
in MRT
Classifieds!



computer software

The worst mistakes are the ones you can't see.

Global Trunking Management
& Billing Solutions for...

SmartNet • SmartWorks • SmartZone
LTR • MPT 1327

For more information,
call (903) 561-6673 or
www.GenesisWorld.com

Genesis
where great ideas begin...

Circle (126) on Fast Fact Card

computer software

RF CAD

new level 2.0

- Seamless rasterized topographic maps
- International enhancements
- Import of multiple terrain data formats
- Biby-D advanced propagation model
- MapInfo file import
- CDS matrix calculation method

RF CAD provides high-resolution propagation results overlaid on seamless rasterized topographic maps. **RF CAD** has been designed to enable the most efficient and accurate planning, and analysis of RF sites, and systems.

800-441-0034
www.comm-data.com

Communications Data Services, Inc.

Circle (127) on Fast Fact Card

32-bit application designed for Windows 95/NT™

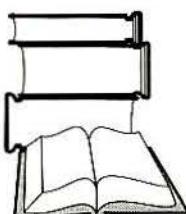
Service - Sales - SMR Billing Pager Billing - Accounting

NOW AVAILABLE
CRI - PRO
YEAR 2000 COMPLIANT
DOS • NOVELL • LANTASTIC • UNIX

We can provide complete solutions including software, hardware, and training.

205-987-1523/205-987-1709 FAX

Circle (129) on Fast Fact Card



Shop from the comfort of
your own keyboard at
www.internettelephony.com

MRT

PRIMEDIA
Intertec



Find Solutions To Your RF Coverage and Site Management Problems... On your own PC!

For either microwave links or area coverage, our Terrain Analysis Package (TAP)™ software helps you find system design solutions in-house.



See details and download demo from our web site!

SOFTWRIGHT, LLC
1010 SO. JOLIET ST., SUITE 204
AURORA, CO 80012-3150 USA
TEL. (303) 344-5486 • FAX: (303) 344-2811
www.softwright.com
e-mail: sales@softwright.com

Circle (128) on Fast Fact Card

Use
COLOR
to
make
your
ad
STAND
OUT!

** WIRELESS SOFTWARE **

Save time designing, optimizing
and managing wireless Radio
communication sites:

- Intermodulation Interference Analysis
- Transmitter Noise Analysis
- Receiver Desense Analysis
- Signal Level Analysis
- Communications Site Design
- Site Management Database
- Equipment Maintenance and Inventory
- Desktop Mapping and Data Products

COMSITE™

CALL 800-845-0408 or 850-906-0748
<http://www.polaris.net/~douglas>

Radio Propagation Software for PC's / WINDOWS

- LMR Predicted Area Coverage - Multi-Site Composite Coverage Maps
- No Radial Generation Required - Real Time Propagation Study / Profiles
- DXF / BMP File Formats - Interface with AutoCAD, MapInfo
- Multiple Propagation Models - Longley-Rice, Okumura, Field Strength
- VHF - UHF / Microwave Point-to-Point Path Profiles and Link Analysis
- 30 Meter and 3 Second Terrain Data - Entire USA On Single CD-ROM



Micropath® Corporation

2023 Montane Drive East • Golden, Colorado 80401-8099

Tel: (303) 526-5454 • Fax: (303) 333-4386

e-mail: microinfo@micropath.com • www.micropath.com



repair services



Triton Electronics, Inc. SERVICE MONITOR REPAIR & CALIBRATION

Exclusive monitor repair since 1973

NIST TRACEABLE

Cushman, IFR, Motorola, Marconi
Also, Voice Logging Recorders



4300 Lincoln Ave., Unit 0

Rolling Meadows, IL 60008

(847) 934-6426 Fax: (847) 934-7195

★ Visit our Website: <http://www.tritonelec.com> ★



Loudoun Communications Inc.

Communications Systems

REPAIR DEPOT

QUALITY SERVICE ON MICROPROCESSOR-BASED
MOBILES, PORTABLES AND CONTROL HEADS.

SURFACE MOUNT REPAIR. MOST REPAIRS \$70 PLUS PARTS.
FREE ESTIMATES.

Warranty Service Available On:
Ericsson/G.E. • Kenwood

585 Factory Shoals Rd.
Austell, Ga. 30168

770-948-9566

WORLDWIDE ELECTRONICS

SALES SERVICE INSTALLATION/INDUSTRIAL & COMMERCIAL

22 Years in Business
Two Way Portable & Mobile
Factory Trained & FCC Licensed
Technicians
2 Way \$45 Flat Rate plus Parts
(718) 448-1717
1208 Bay Street, S.I. NY 10305

MOTOROLA & ERICSSON

PORTABLE & MOBILE REPAIR

\$49

Flat Rate
Plus Parts



800-567-5636

11420 NW 45th Place • Sunrise, FL 33323



MOTOROLA

Authorized Two-Way Radio/Paging Depot

SuperTech

Flat rate labor and warranty repairs

Authorized Dealers get 20% off of labor

800-352-0811

Mobile Communications of DeKalb Inc.
3433 Memorial Drive • Decatur, GA 30032

\$40.00 FLAT RATE

PLUS PARTS & SHIPPING/HANDLING
PLECTRON & INSTALERT MONITORS

TWO WAY REPAIRS ALL MAKES & MODELS
MOTOROLA MINITOR II PAGERS
\$40.00/HR. PLUS PARTS & SHIPPING/HANDLING

FAST TURNAROUND, FCC LICENSED TECHNICIAN

VISA - MASTERCARD - COD

CENTURION COMMUNICATIONS, INC.

892 N. DELSEA DR.

PI: (609) 794-8000

VINELAND, NJ 08360

FAX: (609) 794-8989

<http://www.centurioncom.com>

Regency, Relm, Maxon

Professional Two-Way Radio Repair
UHF, VHF, 800 mobiles & portables, PAs
Reasonable rates, quick turn-around

TA RADIO COMMUNICATIONS

700 S. John Rhodes Blvd. #C1, W. Melbourne, FL 32904
Ph: 407-725-4824 Fax: 407-984-9484

IT IS POSSIBLE!!!

...to receive quick, quality, service at affordable rates.

We repair:

- Transmitter Amplifiers.
- Tower top Amplifiers. (most makes & models)
- Filters, duplexers & combiners re-tuning.
- Special custom projects & equipment modifications.

ADVANCED COMMUNICATIONS & ELECTRONICS INC.

2054J Airport Road (804) 237-8255
Lynchburg, VA 24502-3757 Fax/Phone: (804) 237-4762
E-Mail: advcomm@worldnet.att.net

\$35.00 FLAT RATE

Plus Parts & Shipping

On the following models:

XLH-250 RH-250

RH-256 WH-2516

WH-2510 RFH-252

UC-102 UC-202

TRH-202

• OTHER MODELS—\$45/HR Plus Parts & Shipping

MULTICOM

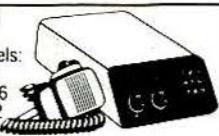
527 S. Broadway

Moore, OK 73160

405-799-7356

800-880-7356

• VISA - MASTERCARD - COD

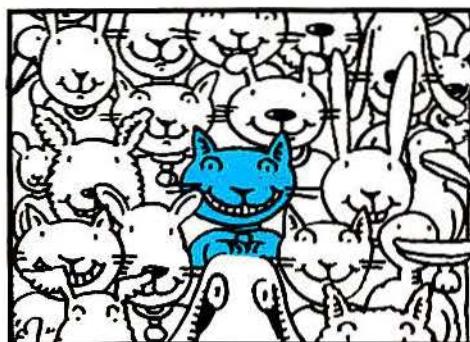


Minitor II Pager
Repair Just \$29.50
Price includes all
Parts and Labor

5 Day turn time
90 Day Warranty

Water/Physical damage and
housing parts not included

P&W Paging and Wireless Service Center 800-822-2180
Fax: 561-683-0059
1300 N FL Mango Rd #26 Dealer price
West Palm Beach, FL 33409



**Want to stand
out in a crowd?**

Try color!

**Call Dawn at
800-347-9375 for
more information.**

classified

prof. consulting services

Engineering For The Wireless World

Wireless Communications Systems and Facilities

Define Acquire Build Manage
Design Zone Test Operate

RCC Consultants, Inc.

100 Woodbridge Center Drive, Suite 201

Woodbridge, NJ 07095

800-247-4796

email - info@rcc.com

Offices Nationwide & International

Circle (130) on Fast Fact Card

tower space

Use **Antenna Sites??**
You need the **SITE FINDER!**
Slash your time, effort and cost to find sites

National List of
Antenna Sites
Give yourself the
SITE FINDER advantage!
ORDER TODAY!!

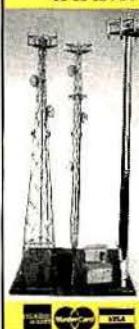
Just
\$295

Call (732) 462-5964 • Fax: (732) 308-4633

Circle (131) on Fast Fact Card

MINIATURE TOWER MODELS

www.creativesculptures.com



Pewter Castings, Specialty
Awards & Gifts for the
Wireless Communications
Industry.

Creative Sculptures
6205 E. Tecumseh St.,
Tulsa, OK 74115
Ph: 918-832-9930
Fax: 918-834-9159
Toll-Free: 888-229-5325
e-mail: marksmith@creativesculptures.com

**RESCO TOWER
COMPANY**

**Sites available
GA and SC**

We build to suit.

**Call Miles McSweeney
912-233-9354**



**CHECK THE FACTS THEN
CALL THE BEST!**
CHICAGO TOWER LEASING CORP.

Environmentally controlled
equipment enclosures, back-up power,
RF engineered sites. Secure.

Premiere sites in Metro Chicago Area—choice of
Federal State, Govt. & all Class A Systems.

STAN STANN
105 MURPHY LAKE ROAD
PARK RIDGE, IL 60068

(847) 823-7713

METRO PHILLY & METRO NYC

Nassau Tower Holdings
has tower space available in NJ
Sussex, Warren, Monmouth,
Ocean and Mercer Counties.
Downtown Princeton NOW AVAILABLE!
Call Tony Gervasi at 609-924-1515, ext. 213

**ARIZONA'S PREMIER
TOWER FACILITIES**
Contact Rick or Charlie Bonifasi
ANTENNA SITES, INC.
800-346-7224



**WANT A
BRIGHT IDEA?**

*Advertise in
MRT Classifieds!*

services

We specialize in UHF trunking licensing!

Let our experienced staff assist you in assuring your
future in trunking. We have found channels where
others have failed. Discretion assured. Other
engineering services available. All you have to worry about
is constructing the system.

**PALCO
ENTERPRISES, INC.**

**Call: 1-800-789-5986
mhastings@palco.net**

MRT

Dawn Rhoden
1-800-347-9375
Classified Advertising Manager

★ FCC LICENSING SERVICES ★
\$80, \$87, \$90 and \$101
—Years of Experience —
Lettie G. Froboese
109 Wallingsford Circle
Youngsville, LA 70592
Voice (318) 856-8141 • FAX (318) 856-1091
E-Mail: froboese@bellsouth.net

ad index

Company	Page Number	Fast Fact Number	Advertiser Hotline	Company	Page Number	Fast Fact Number	Advertiser Hotline
Advanced Charger Technology	19	9	770-582-0001	Larsen Electronics	83	63	800-426-1656
Advanced Receiver Research	71	74	860-485-0310	Marketronics Corp.	48	32	800-845-1230
AEA, div. of Tempo Research	34	26	760-598-8900	Maxrad, Inc.	45	29	630-372-6800
AIR COMM	109	110	602-275-4505	McManus Communications	114	120	870-763-6250
Anritsu Company	9	15	800-ANRITSU	Mechem Electronics	114	121	540-891-0569
Antenex	107	107	800-323-3757	Micropath Corp.	117		303-526-5454
The Antenna Specialists	40	42	440-349-8400	Microwave Data Systems	42	44	716-242-9600
Astron Corp	7	14	714-458-7277	Modular Communication Sys.	89	84	818-764-1333
Astron Corporation	92	86	703-450-5517	Motorola Test Equipment	13	6	800-505-TEST
Avcom of Virginia	100	89	804-794-2500	Narda/L3 Communications	15	7	516-231-1700
Barnett Electronics Inc.	107	106	800-423-3858	New Hampshire Communications	114	119	603-668-3004
BatteryPRO Systems, Inc.	22	19	800-661-9401	Norcomm Corp.	85	80	916-477-8400
Berkeley Varitronics	50	90	908-548-3737	Omnicrom Electronics	70	72	860-928-0377
Cablewave Systems	43	45	203-630-3311	Optoelectronics Inc.	IFC	1	800-327-5912
Cadex Electronics	44	46	604-451-7900	Orbacom Systems Inc.	21	18	609-829-4455
Canadian Marconi	97	87	613-592-6500	OTTO	77	56	708-428-7171
CELWAVE	11	16	800-321-4700	PagoCo	116	124	954-496-9501
Chargeguard	28	24	800-458-3410	PageCorp Industries	116	125	800-957-8700
Citel America, Inc.	12	34	305-621-0022	Paging & Wireless Service Center	106	102	561-683-0022
Comm-Net 2000	105	101	503-672-6475	Pipo Communications	111	112	323-466-5444
Comm/Scope, Inc.	38	40	800-982-1708	Pipo Communications	113	118	323-466-5444
Communications Specialists	BC	3	800-854-0547	Pirod, Inc.	27	23	219-936-4221
Communications Data Services	117	127	800-441-0034	Polaris Industries	112	116	404-872-0722
Computer Resources Inc.	117	129	205-987-1523	Polyphaser Corp.	36	28	800-325-7170
Control Signal Corp.	80	58	800-521-2203	Premier Communications	18	8	714-257-0300
CPI Communications Inc.	81	60	972-429-7160	PROCOMM	115	122	805-497-2397
Crystronics, Inc.	116	124	954-496-9501	Pyramid Communications	110	111	714-901-5462
CTI Products Inc.	111	114	513-595-5900	Radio Express, Inc.	112	117	800-545-7748
DAPA Communications, Inc.	5	13	716-373-7228	Radiomate	87	81	925-676-3376
Dataradio Corp.	54	48	770-392-0002	Radio Soft	72	75	904-426-2521
Decibel Products, Inc.	49	33	214-631-0310	RCC Consultants	119	130	732-404-2400
Dispatch Products Co.	55	49	219-665-7961	RCW Distributing	106	105	800-726-9015
Doppler Systems, Inc.	97	88	602-488-9755	Ritron Inc.	35	27	800-USA-1USA
Doug Hall Electronics	96	70	614-261-8871	Samlex America Inc.	20	10	604-525-3836
Duracomm Corp.	95	67	816-472-5544	Selectone	58	52	510-781-5432
Dynatech Tactical Comms.	91	85	603-880-4411	Sharp Communication	106	104	800-548-2484
EAGLE	70	73	520-204-2597	Shinwa Communications of America	84	64	800-627-4722
Earmark Inc.	88	82	203-777-2130	Shure Brothers Inc.	29	11	800-25-SHURE
EML	111	115	615-771-2560	Simulcast Solutions	82	62	716-223-4927
The Genesis Group	116	126	903-561-6673	SoftWright	117	128	303-344-5486
Glentech	108	109	847-891-2584	Spectrum Communications Corp.	76	79	610-631-1710
Hark Systems, Inc.	67	55	803-875-4480	Telepath	81	61	510-656-5600
Harris RF Communications Div.	61	36	716-242-3851	Telewave Inc.	53	47	650-968-4400
Helper Instruments Co.	79	57	407-777-1440	Thunder Eagle	96	69	703-242-0122
Hewlett Packard	31	12	509-921-4001	TPL Communications Inc.	62	37	213-256-3000
Holzberg Communications, Inc.	106	103	973-389-9600	Transcript International	1	4	800-894-2609
Huber + Suhner Inc.	23	20	802-878-0555	Trident Micro Systems	46	53	800-798-7881
Hustler Inc.	59	30	800-949-9490	Tripp Lite	56	50	312-755-8741
Hutton Communications	25	21	800-442-3811	TRL Technologies	17	78	630-208-2434
Icom America	47	31	206-450-6041	TX RX Systems Inc.	3	5	716-549-4700
ICT	41	43	604-888-6304	Vega, A Mark IV Company	12	17	626-442-0782
IDA Corporation	74	77	701-280-1122	VERTEX/YAESU USA	IBC	2	310-404-2700
IFR Americas, Inc.	39	41	316-522-4981	Vocom Products Co. LLC	88	83	800-USA-MADE
Instrument Associates	73	76	901-947-4000	Wacom Products Inc.	80	59	254-848-4435
Intrafamily Communications	119	131	732-462-5964	WETEC Electronics	108	108	901-286-6275
JBRO Batteries Inc.	63	38	800-323-3779	W & W Associates	57	51	800-221-0732
J.E.I.	84	65	916-677-3210	Xcel Controls Inc.	111	113	219-259-7804
JPS Communications	93	66	919-790-1011	Zetron Inc.	37	39	425-820-6363
Kantronics	115	123	785-842-7745	Zetron Inc.	51	35	425-820-6363
Kenwood Communications	33	25	800-950-5005	Zetron Inc.	65	54	425-820-6363
Klein Electronics	105	100	760-631-2811				

Vertex--For Business, Industry, and Public Safety.

Vertex Radio Communications, the land mobile division of Yaesu, has been at the forefront of high-tech engineering and quality manufacturing for over 40 years. Always keeping customer satisfaction as their goal, the Vertex line meets the ever-growing demands of private sector, public safety, and governmental organizations.

The Vertex full line of wireless radio equipment is compatible with commercial specifications worldwide, and includes a wide variety of portable, compact/mobile base stations, HF/SSB transceivers,

repeaters, and trunking systems.

Incorporating constant customer feedback with break-through design in synthesized radio communication technology has resulted in innovative products like the FTH-2070 32 Channel 5W Dual Band VHF/UHF Portable radio introduced in 1988. This unequalled radio gained immediate acceptance for its ability to link public safety organizations in time of crisis, and remains unique to Vertex today.

Now, with its expanded line--including the ultra-compact VX-10, 40 and 102 Channel

VHF/UHF Portables -- Vertex Radio Communications provides solutions to communication needs for business, industry, and public safety.

For more information about the complete line of Vertex Radio Communications products, see your authorized Vertex dealer, or call:

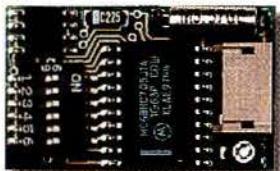
562-404-2700



United States & Canada: Yaesu U.S.A., (562)404-2700. Mexico, Central & So. America, (305)593-2500

©1998 Yaesu USA. Specifications subject to change without notice.

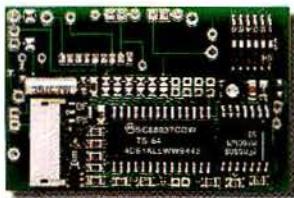
Circle (2) on Fast Fact Card



SS-64 \$28.95
Microminiature DIP Switch Programmable CTCSS Encoder.
Includes 64 tones from 33.0 to 254.1 Hz.
.66" x 1.08" x .21"



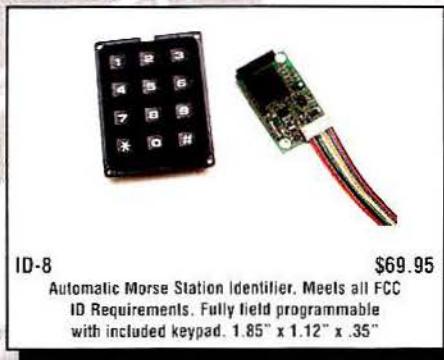
TS-64 \$54.95
Sub-miniature Programmable CTCSS Encoder-Decoder.
Includes 64 tones from 33.0 to 254.1 Hz.
.78" x 1.70" x .25"



TS-64DS \$57.95
DIP Switch Programmable CTCSS Encoder-Decoder.
Includes 64 tones from 33.0 to 254.1 Hz.
1.25" x 2.0" x .30"



ANI-1 \$39.95 **ANI-2** \$299.95
Automatic Number Identification System
ANI-1 Encoder - 1.13" x .66" x .22"
ANI-2 Station Decoder - 5.4" x 5.8" x 1.4"



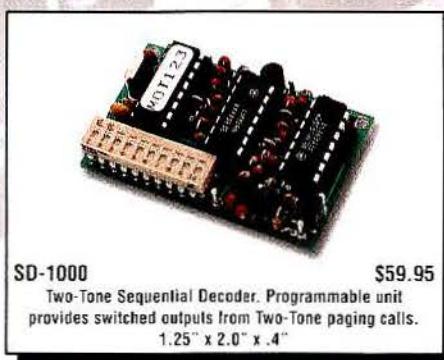
ID-8 \$69.95
Automatic Morse Station Identifier. Meets all FCC
ID Requirements. Fully field programmable
with included keypad. 1.85" x 1.12" x .35"



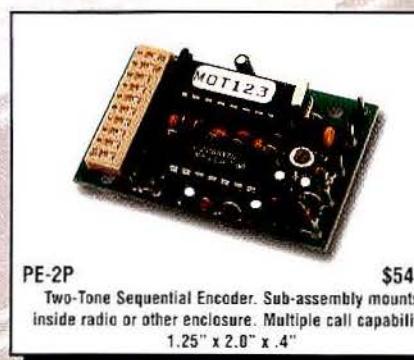
TP-3200 \$279.95
Full Featured Shared Repeater Tone Panel with ALL 157
CTCSS/DCS codes. In Desktop or Rack Mount versions.



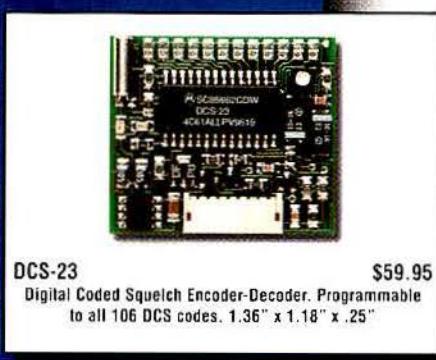
PE-1000 \$224.95
Desktop Paging Encoder. Two-Tone Sequential.
other formats available. 7.5" x 7.8" x 2.7"



SD-1000 \$59.95
Two-Tone Sequential Decoder. Programmable unit
provides switched outputs from Two-Tone paging calls.
1.25" x 2.0" x .4"



PE-2P \$54.95
Two-Tone Sequential Encoder. Sub-assembly mounts
inside radio or other enclosure. Multiple call capability.
1.25" x 2.0" x .4"



DCS-23 \$59.95
Digital Coded Squelch Encoder-Decoder. Programmable
to all 106 DCS codes. 1.36" x 1.18" x .25"



TE-64D \$129.90
Multi-Purpose CTCSS/Burst Tone Encoder w/LED Display.
Great for the Benchtop. 5.25" x 3.3" x 1.7"



FILTERS
Call us for the lowest cost, 12.5kHz channel spacing,
exact replacement, crystal and ceramic IF filters for
Part 90 Refarming.

- Same reliable and cost effective products you have known and trusted for 30 years!
- Full FIVE YEAR WARRANTY on all products
- Same day shipping on most orders
- "INFO FAX" with 24 hour information
- Toll free 800 numbers for both voice and FAX

See our complete
catalog and product
descriptions on our
web site at
www.com-spec.com

Circle (3) on Fast Fact Card

Outside USA or Canada: Jescom International, 501 17th Avenue, San Leandro, CA 94578 USA • Phone (850) 574-1421 • FAX (850) 574-5297



COMMUNICATIONS SPECIALISTS, INC.

426 WEST TAFT AVENUE • ORANGE, CA 92865-4296

(714) 998-3021 • FAX (714) 974-3420

ENTIRE U.S.A. (800) 854-0547 • FAX (800) 850-0547

